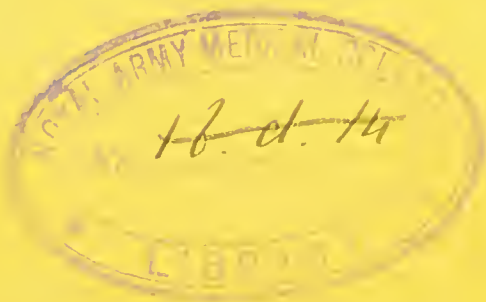




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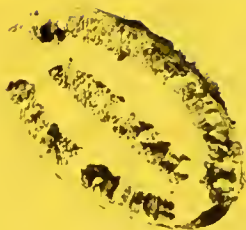
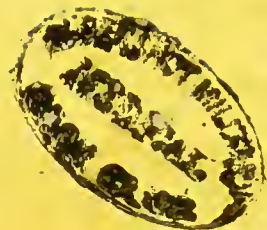
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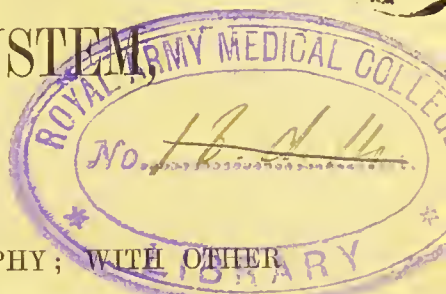
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# SYPHILITIC AFFECTIONS

OF THE

## NERVOUS SYSTEM,

AND A CASE OF



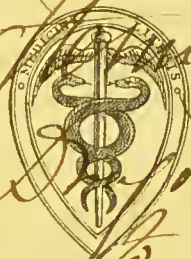
SYMMETRICAL MUSCULAR ATROPHY; WITH OTHER  
CONTRIBUTIONS TO THE PATHOLOGY  
OF THE SPINAL MARROW.

*Presented by*

BY

THOMAS READE, M.B.T.C.D., L.R.C.S.I.

*J. W. Thompson, M.D.*  
*47 Thompson Street*



*Re Mr. M. O. L. G. Aldershot.*

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## P R E F A C E.

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A PERIOD of thirty years has passed since I first made a positive diagnosis of what is now designated in comprehensive terms, Syphilitic Affections of the Nervous System.

For more than ten years I continued to diagnose cases of this nature, during which space of time I had reason to believe that my opinions and views were unrecognised or altogether discredited in the profession: at least, I was certain that all written authority was adverse. The repetition of cases, attended with the decided success which followed the administration of specific treatment, forced on me a conviction so complete, that I regarded it to be a duty to the profession to publish the cases which led to my undoubting conviction, as I had reason to believe that those offsprings and evidences of constitutional syphilis were by no means rare, and that the attention of the profession being called to

this point, I considered the question would undergo a just scrutiny by those whose opportunities in metropolitan hospitals would enable them to seek out and select cases bearing a similar syphilitic and pathological history. 'This ordeal and test of the faithfulness of the narration and description of the morbid evidence imputed to this nosological source having been for many years allowed and noticed in very many medical periodicals as well as monographs, I am thereby induced to collect and re-publish in a single volume the scattered communications which originally appeared in the 'Dublin Quarterly Journal of Medicine and Surgery,' with some cases not before published; an Appendix being added, containing some illustrative notes and references.

It was in the year 1837 that I saw the first case\* (No. 9, Second Series) which guided me, and fixed my attention on the discredited phenomena of syphilitic disease affecting the nervous system.

This case (9th, Second Series) had been treated for eleven months for quotidian ague, which had resisted all the usual anti-periodic specifics in Corfu, where the disease had its beginning. The patient left Corfu on sick leave. In London he was again treated without success; also Dublin and Belfast: finally returned to his native place to render up his life among his family, of an inexorable malady.

\* See note and reference in the Appendix.



His rapidly failing power caused me to be consulted. On my first visit, I discovered what I then supposed to be a complication of constitutional syphilitic disease. On each internal malleolus I detected a node; also an abscess of the cranium, on the "os frontis," which had been opened in Corfu by one of the military surgeons. The most positive denial of the possibility of a venereal infection restrained me from the employment of specific treatment. When the progress to death became inevitable, the patient related to me an incident in his life sufficiently confirmatory of my diagnosis to induce me to make one more effort to save life. The perusal of the case will show with what marvellous quickness mercury interposed to avert dissolution and bring about his recovery.

In 1845—1847 a succession of cases brought this subject again under my observation, but upon those occasions with such significance and prominence of symptoms, that I deemed it my duty to offer the substance of my observations for publication to the editor of the 'Dublin Quarterly Journal of Medicine and Surgery.'

The editor declined the paper, on the ground that he would only publish original matter, and alleged that I had been anticipated by M. Ricord, of Paris. I requested him to refer me to the publication. He said it was in the room, had his hand

on it lately, tossed over many unbound pamphlets, though ultimately he abandoned his search, but promised to let me know where I could find the information I sought. He failing to fulfil his promise, I wrote to a medical friend in Dublin to wait on him to ascertain the designation of the publication so interesting to me. The interview only produced the information to me, by letter, that the editor had no other authority for his statement than the lectures by M. Ricord published in the 'Lancet,' 1847; which lectures I myself had, and had very carefully read before our communication, or my offer to publish.

On the same day of my interview with the editor, I was for many hours with Mr. Cusaek, in his house in Kildare Street. I took the opportunity to ask him if he had known or heard of such a book by M. Ricord, or of any of the medical faculty of Dublin who entertained opinions or convictions similar to my own. He replied, that he believed if I could prove those opinions, I would be *perfectly original*; as far as he knew the mind of the profession, my views were not received; the only person he ever heard express a similar conception was the late Mr. Abraham Colles, but that he never had been able to establish in evidence the ideas he entertained.

In the autumn of 1850, Dr. R. B. Todd was on a tour through part of Ireland, in way of relaxation

and amusement: when in Belfast he came to visit me. In the course of our conversation, I mentioned that if his visit had been on the previous day I would have asked him to see a patient of mine who had been in a very critical state, but chiefly I desired his opinion because the malady was an unrecognised disease. This led to my describing one of those cases of syphilitic disease of the nervous system. For the first time I found a physician perfectly conversant with the disease, and holding opinions on the nature of the disease, also on its treatment, conformable with my own views. He was greatly interested, and remained a long time with me discussing the subject. Dr. Todd's first clinical lecture was published in 1851.

Subsequent to these incidents, it was perfectly accidental that my cases were ever published. The fortuitous meeting with the late Dr. Neligan at dinner in 1851 led to his informing me that he had just been induced to undertake the editorship of the 'Dublin Medical Journal,' and he expressed an earnest wish that provincial medical men could be induced to send contributions, as they could undoubtedly render valuable assistance to the periodical. I mentioned that I had in 1847 offered to his predecessor a paper, which I described to him, that had been refused, as not being original. He expressed a desire to have the paper, which I

at once promised to him, and it appeared in the ensuing quarterly publication.

While I had these remarkable examples of disease under observation, I was also desirous that the patients should submit themselves to the investigation of surgeons holding prominent positions as metropolitan consultants. This I deemed just and advisable for the patient under prolonged disease, as well as to test the authoritative voice of the profession on a subject of deep interest and importance. The result of the investigation and opinions pronounced were not in accordance with the opinion suggested by me ; so that I had reason to conclude no one in leading practice supported me in 1847.

I re-publish the separate papers in the original form in which they were offered to the profession in the ' Dublin Quarterly Journal,' especially as I have no reason to change the views I then submitted as the results of my personal experience of the cases related.

A few foot-notes attached to the letterpress, and some additional cases in an Appendix, will complete the object I have in view.



# SYPHILITIC AFFECTIONS

OF THE

## NERVOUS SYSTEM,

ETC. ETC.

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### I.

#### NOTES ON CASES OF SYPHILITIC MENINGITIS.

"Lues Gallica, licet quasvis fere partes corporis occupet aliquando, frequentius tamen superiora invadit. . . . unde et inclusum his encephalum pessime afficitur, et varii capitis morbi sequuntur. Sæpe observantur cerebri læsiones in lue Venerea inveterata, a levissima vertigine, ad lethalem apoplexiam usque: pessimam Epilepsiam, cæcitatem, surditatem, &c.

"Possunt oriri tumores gummosi, et exostoses, in calvariæ osseæ parte interna, quæ premendo cerebrum, omnes ejus functiones turbant."—GERARDI VAN SWIETEN, 'Commentarii.' Lug. Batav., 1772, vol. v, p. 404.

"On the post-mortem examination we found the dura mater firmly adherent to the cranium, and also to the visceral layer of the arachnoid, for an oval space two inches in the long and an inch and a half in the short diameter. At this point the dura mater was three or four times its natural thickness; below the two layers of the arachnoid there were two large masses of yellow colour, like concrete pus, opposite to which were corresponding depressions or concavities on the surface of the cerebral hemisphere; at these points the cerebral substance was slightly softened, and redder than natural; at the same point, on the opposite

side of the skull, a similar morbid alteration in the dura mater and arachnoid was commencing.

“Symptoms of this case before death:—Great loss of memory; fits; imperfect paralysis of right side, and pain of right parietal region.”—Dr. TODD, “Clinical Lectures,” ‘Medical Gazette,’ January, 1851.

For above thirty years no disease has obtained more of the attentive inquiry of surgeons than syphilis, especially in its primary and secondary forms. The announcement of a plurality of poisons, and that venereal sores would heal, and syphilis at any of its stages might disappear by an unaided effort of the constitution, aroused the wonder, and invited to similar investigations many surgeons throughout Europe, and subsequently wherever civilised man has made his habitation on the earth. It has been a great epoch in medical history; but it may be asked, is our knowledge complete and settled after so protracted an inquiry? The latter positions—the healing of venereal sores, and the disappearance of syphilis without the intervention of mercurial action—are established facts. The plurality of poisons is still “sub-judice,” a controverted and unsettled point, either to confirm or confute which would need a systematised course of rigid experiment never yet carried out. Mr. Carmichael maintained that the uniformity of syphilis in infants, no matter what the original form of disease of the parent (whether papular, pustular, or phagedenic), did not militate against his doctrine; neither did a common assemblage of symptoms in the tertiary forms of the disease in the adult seem to him to oppose his assumption of the plurality of poisons. His reasonings are to me far from conclusive, and his facts seem to be at

variance with his theory. In the morbid phenomena of the other animal poisons (smallpox, scarlatina, measles, &c.) we constantly observe great diversity of external appearance, with constant and regular repetitions of the same diversities; we recognise them as influenced by the existing state of the constitution of each individual at the time he contracts the poison. May not the individual constitution likewise modify the external phenomena in syphilis? If the concluding series of visible and constitutional symptoms resolve themselves into identity, is it not a strong ground of credence of unity at the origin? Those who wish to examine this question in its present equivocal and unsettled state, I would refer to the able and impartial statement of Mr. Aston Key, contained in his "Report on Syphilitic Sores" in 'Guy's Hospital Reports.'\*

The history of the cases appended to this paper has suggested these observations.

Among the most remote and latest signs of constitutional syphilis are those of cerebral origin, and to them I would desire to give a prominence and interest that their deep importance entitles them and their frequent obscurity requires, the more especially as those who seek for information in modern works and lectures will find either a bare allusion to such symptoms or entire omission of any notice of them. M. Ricord, alluding to the "*action of the osseous affection on the neighbouring parts*," thus speaks:—"Another consequence of this species of compression is epilepsy; but this otherwise formidable disease is in such cases easily got rid of. The fits commonly seize the patient when

\* Vol. iv.

the osseous growth producing the compression gets more considerable and irritating. I must not omit to mention paraplegia as a casual effect of tertiary syphilis in the bones; the nervous disturbance is then the result of an osseous lesion, which latter begins by circumscribed nocturnal pain, and is developed very slowly. Paraplegia may also be produced by a cutaneous elastic tumour; but I need hardly say the latter is never preceded by the gnawing pains which generally usher in osteitis." Mr. Aeton\* merely quotes this extract from M. Ricord; on the disorder of the mind they are both silent. I wish here to refer to a clinical lecture delivered by Dr. Todd, of King's College, on the difficulty of diagnosis in tertiary syphilis. "The patient had contracted syphilis fourteen or fifteen years ago, and had a chancre and a bubo. He took a large quantity of mercury without medical advice, and was freely salivated. From many consequent evils attendant on this disease he seems to have escaped pretty well, and no unfavorable symptoms occurred till five years ago, when he applied to one of the metropolitan hospitals for contraction and rigidity of the flexor muscles of the right forearm, and numbness of the same region. The nature of this case *was mistaken*, and, after leaving this, he went from *one hospital to another, but got no relief*. A friend gave him a prescription which cured him. It was hydriodate of potash. Mr. Bowman recognised the disease."

I may observe that the clinical lectures of Dr. Todd possessed great interest for me, as our observations

\* 'A Practical Treatise on Diseases of the Urinary and Generative Organs.' By William Aeton. Second edition, 1851.



were so perfectly independent of each other. His remarks on the liability to error in diagnosis, the almost unvarying success of treatment under elcar diagnosis, the occasional indispensable resort to mercury, so fully correspond with my own experience, that I cannot but feel support and confidence in submitting the cases appended, as illustrative of the necessity for additional inquiry, and for an endeavour to obtain a more exact diagnosis, which cannot fail to ensure treatment more successful.

CASE I.—*Syphilitic Meningitis ; Paraplegia ; Hemiplegia ; Amaurosis ; Difficulty of Articulation, with Mental Hebetude.*

Mr. F—, in July, 1847, was accompanied to my house by a surgeon of Belfast, who was naturally alarmed by the rapid advances of paralytic and other cerebral symptoms in his case. The patient required to be supported on his feet while his clothes were removed from the upper part of his person. His speech, from difficulty in articulation, was very imperfect; his powers of arranging his ideas and memory were slow and defective; vision very imperfect in both eyes. The gentleman who accompanied him had known him for some time. He had been treated for years by another surgeon for secondary syphilis—chiefly intractable ulcers on the limbs, face, and head; and on these parts there were several large cicatrices. He had placed himself under the former gentleman's care for progressively increasing amaurosis; the paralytic symptoms supervened, and rapidly advanced until he exhibited the aggravated and almost hopeless state of

general paralysis in which I saw him. The history of the case, his countenance, and general appearance, led me to the impression that all the symptoms might be assigned to compression of the brain by development of syphilitic tumours of the dura mater; but as this could not be a certain diagnosis, and to guard against an error in judgment, I considered the rapid exhibition of mercury to be the safest course. I therefore advised the entire scalp to be shaved, a blister applied immediately over it, and one drachm of strong mercurial ointment to be rubbed in on any convenient surface twice a day. But I apprehended a speedy appearance of coma, and a necessarily fatal result.

Some eight days afterwards I saw his surgeon, who told me that our patient had made a rapid recovery, and was then able to run up and down the steps of a very steep staircase. To my additional surprise, a well-looking, dark man, with clear and expressive eyes, addressed me one day in the street, and, asking me if I did not know him, brought to my recollection the visit of himself and his medical attendant to my house less than three weeks before. He was completely recovered, looked in full health, had perfectly regained his powers of motion, vision, and articulation, and was in full possession of all his faculties. Mercury here released every oppressed organ, gave flesh and strength by restoring the animal functions, and afforded one of the happiest triumphs of medical art over disease I ever witnessed. Death must rapidly have closed the scene had not this powerful and efficient agent arrested its course.

*Remarks.*—This patient was about thirty-two years

of age, with eyes, hair, and complexion as dark as any native Italian; well formed, naturally of a very robust frame, and with the semblance of a good constitution. About four years before I saw him, after a suspicious intercourse, a bubo formed in the groin. No sore or cicatrix was seen on the penis. He placed himself under a well-educated and skilful surgeon, who thought it advisable, notwithstanding the absence of chancre, to administer mercury for some time, under the use of which the bubo disappeared. After he had discontinued mercury it again formed, and burst while he was engaged in active exercise. Some months subsequently he was attacked with an eruption which produced intractable ulcers. His surgeon treated him without success, as to their healing, for many months, until he went to the sea, and then they healed while he was using the open sea-bath.

It is worthy of observation that here we have a bubo without chancre. This bubo was certainly not phagedenic, yet was followed by what I conjecture to have been rupia.

Whether a man be a mercurialist or a non-mercurialist, he may admit it to be quite true that the ulcerative forms of syphilis do not encourage the employment of mercury; but I feared to rely on hydriodate of potash in a case of such extreme emergency. And I must add that I still have to acquire the enthusiastic confidence of M. Ricord in its unerring dominion over tertiary syphilis.

The patient has since been well able to pursue his business in life, but has suffered many of what Ricord calls the accidents of tertiary syphilis; he has had

many attacks of cranial pain, want of sleep, pain, enlargement of bones and joints, and very lately he has had double sarcocoele; all have, more or less, readily yielded to the hydriodate of potash. The doses are now raised to half a drachm three times daily. He has the confirmed syphilitic diathesis; but he makes out life *versus* disease, with good grounds to expect his constitution will finally surmount his malady; his life has never, since the paralysis, been in the slightest danger.

CASE II.—*Syphilitic Meningitis; Mental Incompetence; Incoherence; Suicidal Propensity; Paralysis.*

Mr. M—, a gentleman about twenty-six years of age, was attacked with hemiplegia of the right side while travelling in the night mail. His intellect was disordered, and he was incapable of appreciating his own state and directing accordingly. A clergyman, who lodged in the same house, requested me to see this gentleman about eighteen hours after the attack. He informed me that, some months before, he had observed incomprehensible ramblings in his conversation, and the expression of strange and incongruous ideas. This had become apparent in the course of his daily occupation, one of trust and considerable mental labour; and the head of the establishment had placed him under the care of his own physician, a gentleman of experience and in extensive practice, who considered it requisite to have *every means for self-destruction removed out of his reach*. After some length of treatment he advised change of scene, and all the adventitious aid of new associations and amusements, if possible, to change



the current of his ideas. He went to friends in London, and while there they deemed it requisite to induce him to place himself under the care of a physician, who (on what ground I do not know) prescribed for him hydriodate of potash, with decoction of sarsaparilla, which he used for about five weeks. He returned, in some measure improved, and resumed his official duties. He was on business connected with his office, and returning home, when he was seized with paralysis. All this I learned from the clergyman, whom motives of humanity induced to take a great interest in the matter. He was aware that the invalid had formerly been under my care, and that I probably had a more intimate knowledge of the private history of his life than any one else. In fact, he had come to me with an excavated syphilitic ulcer of the throat more than twelve months before. I was dissatisfied with his want of steadiness in following my directions, and he broke off attendance before I dismissed him. In some months after he again called on me for advice. He had syphilitic iritis of both eyes. There was no eruption. He again returned to his employment, earlier than I advised. Considering the antecedents, and the slow progress of his cerebral symptoms, which I count as significant of intra-cranial syphilitic disease, I believed that his disease was syphilitic meningitis, with deposition. I took blood from the arm, had the head shaved and blistered, gave active purgatives with tartar emetic, and, after the free action of the bowels, began the use of mercury. In about four days mercurial action was established, the disease rapidly disappeared, and there was a perfect restoration of his mental and bodily functions.

*Remarks.*—It may be alleged that the treatment for paralysis was in accordance with that usually employed, which is by no means disputed. It is the antecedent condition of mental disturbance, the length of time it existed in a chronic state, without being amenable to treatment by the ordinary remedies, its mitigation under hydriodate of potash, and the previous history, which seem to me to justify the assumption that syphilitic tumour of the dura mater was the cause of this cerebral irritation. The perfect disappearance of every symptom, under mercurial action, in a period incomparably shorter than that in which cerebral disease, originating from causes of more usual occurrence, would have disappeared, confirms me in that view. As this gentleman, soon after his recovery, emigrated to a very distant region, such incontrovertible testimony of the fidelity of the diagnosis cannot be adduced as substantiates that of the previous and the following case. I only know that, some months after his arrival in the country of his adoption, in a letter to a friend he expressed the warmest feelings of obligation and gratitude to me for the enjoyment of perfect restoration to health. A drier, warmer, and more equable climate is undoubtedly among the agents capable of overcoming the syphilitic diathesis.

CASE III.—*Syphilitic Meningitis; Epileptic Seizure; Intermittent Cranial Neuralgia; Mental Derangement; Paralysis of the Sphincters.*

Mr. I. T—, aged forty years, while with a coursing party on a mountain, suddenly fell, became insensible, and was much convulsed. The insensibility, his com-

panions say, lasted half an hour. He then gradually recovered, without any deprivation of the power of motion or of sensibility. He was seen by a physieian on his return to his friend's house. Nothing, I believe, was prescribed, execept some aperient medicine, and caution as to regimen. When he came back to Belfast, and called on me, he looked ill and eacheetie. I advised him to resume the hydriodate of potash, which he had before used for various tertiary syphilitic symptoms. He improved again in health, until a subsequent period of about three months, when, on a journey, he sat in wet clothes for more than three hours. He did not apply to me until four days afterwards. He then complained of pain in the head; his countenance looked pallid and eacheetie; his pulse soft and undulating (an unfilled artery) and slow; the points of the fingers very pale and cold, the nails bluish, denoting an imperfect capillary circulation. He said he required a good purging and he would be well enough; as he had been living freely, I consented. Active purging brought no relief; the cerebral pain became aggravated, and he had no sleep. He was ordered a full opiate, after which he slept well, but the pain in the head now came on in paroxysms with intermission; I then prescribed for him quina, and continued the opiate at night.

The pain in the head in its extreme intensity resembled neuralgia. He had nights of distracting suffering, and no relief obtained execept from quina and opium. I next ordered for him ten grains of hydriodate of potash in solution every sixth hour. His suffering increased, and he became so excited under the

want of relief, and his friends so exceedingly alarmed, believing the attack must end in apoplexy, that I obtained the assistance of a physician who was familiar with his case for some years. This gentleman entirely concurred with me as to the impropriety of bleeding (which was urged by the patient and his friends); and also that our only dependence, on the failure of the iodide of potassium, was in mercury, which formerly saved his life. The vertex was shaved and extensively blistered, and half a drachm of mercurial ointment rubbed in night and morning. Generous living was directed, with animal food and wine. The blister was dressed with a weak ointment of tartar emetic. On the fourth morning the gums became florid (previously the gums and mucous membrane of the mouth much resembled those of an anæmic female), with decided relief of all the symptoms, but no mercurial fetor. We continued the mercury for a fortnight, but did not obtain satisfactory evidence of its constitutional action, except the perfect subsidence, from the fourth day, of all his distressing sufferings, when he refused to continue it any longer; we therefore advised him to resume the hydriodate of potash, as before directed.

Six weeks after the last attendance I was asked to visit this gentleman again. His disorder had now assumed a different character. He ceased to take an interest in any of his former pursuits; he never spoke except when addressed, and then said "he was not ill," and had no pain whatever. It was observed that he fell asleep whenever he sat down, he also slept during the night. Occasionally he took up a book, but it was very apparent he made no mental effort to comprehend



the contents. In this state he remained, with little change, for several days; then it was observed that he had lost reckoning of time as to the day of the week, the hour of the day, whether he had taken his meals, &c. When he spoke he believed persons long dead to be alive in the house. At last a disposition to be violent and excitable caused much alarm. He, however, quietly submitted to have his head shaved and a blister applied, and he was ordered ten grains of the hydriodate of potash every sixth hour. He had not the slightest pain; there was no fever; his skin was cold; pulse low and very feeble, sometimes scarcely discoverable at the radial artery. The mental disorder having exhibited more marked evidence of its nature by acts of a more public character, it became necessary to have him placed under strict observation, but without restraint. The sphincters of the bladder and rectum then lost their power, which, with other threatening symptoms of cerebral engagement, determined us once more to have recourse to mercury, which again, though more gradually, was attended with the happiest results. First the sphincters resumed their power; the pulse became developed; he took food; his mind recovered its coherence and correct perception, but his manner was torpid and indifferent. On account of the anæmia, he got ten drops of muriated tincture of iron three times a day. Although one drachm of mercurial ointment was well rubbed in night and morning, its sensible action was limited to a slight turgescence and florid colour of the gums; otherwise its effect was only shown by retrocession of all the morbid symptoms, and progressive regeneration of health. In three weeks

the rubbings of mercurial ointment were discontinued, and he took corrosive sublimate, gradually increased to one grain a day, in compound tincture of bark. He remains in health now more than a year, and has resumed active bodily exercise, which he had given up for several years.

*Remarks.*—My knowledge of this case commenced about six years ago. The patient had then an eruption, sealy and papular, which his surgeon (since dead) considered to be syphilitic; he himself discredited that view of its nature. I agreed with his surgeon. The patient said he had taken decoction of sarsaparilla and hydriodate of potash until they excited so much loathing that he refused to take more. He was then, by direction of his surgeon, using hydriodate of potash in pills. I advised mercury, but it was not given. Three years after this period I saw this gentleman, in consultation with a physician, his personal friend, who had seen him occasionally under very much broken health; he complained of great pain and difficulty in swallowing; it came on gradually, and increased so much that when I saw him he declared deglutition to be impossible, and had nearly abstained from food, even liquids. He was without sleep at night, and in a state of the most abject despondence. His physical powers were so prostrate (although he had been a remarkably muscular, energetic man) that he was wheeled about in a Bath chair; his colour was quite pallid, and of a peculiar leaden tinge; pulse feeble; he was, in fact, sinking under the combined effect of inanition and deprivation of sleep. His voice was snuffling, like that of a sufferer under syphilitic disease of the nasal passages; yet the closest exami-

nation showed no ulcer of the throat, fauces, or nose. All the mucous membranes were particularly pale, that of the pharynx extremely tumid and swollen, and the *isthmus faucium* much contracted. Externally, beneath the inferior maxilla, in the sub-mental space, there was a large cluster of absorbent glands filling it up; at the lateral parts on both sides of the neck there were many of the glands enlarged, altogether throwing great obstacles in the way of an examination of the throat; over the mastoid process of the left temporal bone there was a distinct tumour of the perieranium, which had softened, and contained matter. After very mature deliberation, I came to the conclusion that the disease was syphilitic cachexia. The physician who was associated with me gave me his full concurrence and support, and we agreed to introduce mercury into the system with the greatest caution. Fifteen grains of mercurial ointment were rubbed every night on the inside of the thighs; a full opiate was given at night, and as much fluid aliment as he could be induced to swallow; on the third morning mercurial fetor was apparent. Before the mercury acted great alarm was caused on two successive nights by suffocative spasm of the larynx, which caused us infinite anxiety, and rendered it necessary to have a medical man sleeping in the house. The fourth morning ptyalism was so marked as to forbid the next friction. All the symptoms were diminished; periosteal abscess much smaller; glands reducing, and unmistakable improvement in deglutition. Afterwards it was a case of steady progress to the twelfth day, when he was going about, perfectly recovered in his own opinion. All his symptoms were

removed, no doubt, and he was strong and able to walk about freely. He refused any further treatment.

In less than three weeks the glandular tumours had returned. He blistered himself on the throat, as to this measure he attributed his late recovery; but the glands still increased, and he again submitted to be treated. He objected so strongly to use the ointment, that we gave the medicine internally—the proto-iodide of mercury with hemlock and opium. All symptoms again rapidly subsided, but he complained of colicky pains, and much depression. Notwithstanding his complaints he improved daily in flesh and strength, and indulged an excellent appetite. We still urged the continuance of mercury, though all traces of disease were removed, except the residue of the glandular tumours beneath the lower jaw. He determined, however, on going to Dublin for advice, and there placed himself under a surgeon of the highest eminence. In Dublin it was doubted that the disease was syphilis; he got gentle tonics, with a very nutritious and stimulant diet, and his night opiate was discontinued. At the end of two months his bodily vigour had again decayed; he abandoned all medical treatment, and to the eyes of his friends he appeared to be sinking. He was now induced to leave Dublin and go to the neighbourhood of Kingstown. The change of air and a wonderful effort of the constitution raised him out of his extreme debility; his appetite returned, and he quickly rallied; in a month he came back to the north of Ireland.

After six months of good general health a new train of tertiary symptoms commenced. Elastic tumours

formed in the areolar tissue, external to several muscles, over the biceps, the deltoid, and the pectoral. They soon disappeared under the administration of the iodide of iron. The next distinctly syphilitic symptom was double sarcocele, which yielded to a few leechings (when there was much pain), hydriodate of potash internally, and iodine ointment to the testicles. Several relapses followed. Hydrocele supervened, but all the symptoms were removed and restoration of both testicles brought about by iodine treatment.

For about two years Mr. T— enjoyed excellent health, with occasional threatenings of renewed symptoms. Iodine was to him a specific; and his general health became so good under it that, on one occasion, he took it without interruption for four months. The dose was progressively raised from five to twenty grains, three times a day, but on the supervention of intracranial disease the remedy became powerless.

Mercury was not administered, either for the primary or secondary symptoms. For the syphilitic cachexia only nine or ten frictions of fifteen grains each were used; for the relapse, thirty grains of the proto-iodide of mercury in twenty-one days.

The practical conclusions I would deduce from the foregoing cases are very obvious. First. That a single symptom of cerebral disturbance, such as some form of mental disorder, may alone indicate the organic mischief in progress; a cachectic countenance may excite suspicion of its nature; but a close investigation of the previous history of the patient's diseases and symptoms are required to affix its true character. Secondly.



That the employment of mereury, in this late stage of syphilis, is unattended with those formidable consequences of which we are so strongly forewarned as forbidding its use. It is true, mereury never was pressed much beyond the disappearance of symptoms, and whenever employed it was as the last resource of extreme peril and emergency, all other means having failed. But no measure of bodily exhaustion, even such as I feel the feebleness of words to represent, has deterred me from its employment once I had discriminated the disease, guarding myself, however, by a measure and method of use appropriate to the case.

I subjoin here the following contrast and comparison of mercurial action on the constitution of patients suffering from primary and tertiary syphilis.

When mereury has been administered for a primary sore, in a constitution of unexceptionable health and vigour, it will not be disputed that its action will always be marked by physical reduction and depression. There will be loss of flesh and weight; muscular elasticity and power will diminish; the countenance becomes pale; the skin clear, and prone to perspire on slight exertion; the intellect unfitted for sustained effort. All these will occur, although the diet be adequately nutritious and abundant for a person in health, and moderate exercise and exposure to the atmosphere be still permitted. But under confinement all these constitutional evidences of mercurial action become more aggravated, together with in all, ordinarily, some degree of mental depression, and in some alarming physical and mental prostration. In fact, mereury in all cases visibly acts as a poison in a lower or a higher degree.

Under this constitutional ordeal the animal poison which is secreted by the sore is in some inexplicable mode neutralised, or prevented from entering into the circulation and contaminating the system. Such is a feeble and imperfect outline of the phenomena indicative of mercurial action in a sound person affected with a primary sore. But all these phenomena are directly reversed when the body has long sustained the inroads of the syphilitic poison, under which the powers of the constitution become prostrated. The more advanced the stage, the wider the range of involvement, the more signally does mercury, if *appropriately and judiciously employed at the right conjuncture*, exhibit its strange conversion into a tonic, and its prompt and most decided action as a restorative. All the functions of life are rapidly roused into vigorous effort—refreshing repose revisits the patient, worn with pain and exhausted by sleepless nights—appetite and digestion return—blood is quickly regenerated—the muscles recover tone and power—the eyes lose their dull and desponding cast, and resume brilliancy and expression—the mind becomes hopeful and exhilarated—flesh and weight are added, yet no medicine has been administered except mercury. How to explain and reconcile these antagonising agencies I do not purpose to attempt; the facts I have repeatedly witnessed in several other forms of syphilitic cachexia, independently of the cases now related.

## II.

CASES OF TERTIARY SYPHILIS; WITH  
OBSERVATIONS.

1. FATAL CASES OF SYPHILITIC MENINGITIS.
2. PROTRACTED TERTIARY SYPHILIS.
3. SPINAL SYPHILITIC MENINGITIS.
4. TERTIARY SYPHILIS, COMPLICATED WITH QUOTIDIAN AGUE.

I RESUME the subject of cerebral syphilitic disease, in order to submit my subsequent experience in this and other examples of disease emanating from syphilitic contamination, and as tending to exhibit the formidable character of the malady, when once engrafted on the human system, extending often to total subjection of the constitution and a fatal termination.

Systematic writers have uniformly bestowed their labour and attention chiefly in the description and definition of primary ulcers, and the primary constitutional or secondary forms of the disease, with the treatment—though the rarer, but no less important, and more varied class of protracted and enduring diseases, called tertiary, has been more cursorily dealt with, though they are certainly more perplexing, from their complications, and affinities to other disorders of the human frame.

The late eminent and skilful physician, Dr. Todd, of King's College Hospital, London, and myself were,

I believe, the first\* who attempted to give a prominence and distinctness to this form of syphilitic disease, by calling attention of medical men to a very important diagnosis, and one on which, from the silence of the chief authors usually referred to for information, little or no guidance or instruction was afforded.

The statement of John Hunter, that the brain was exempt from syphilitic disease—considering how much his authority and opinion influenced the minds of the first surgeons in the empire for a long period—seems to have blinded his followers, and shut out from them the perception of an important truth; for otherwise it would seem unaccountable how a form of disease, now so fully recognised and acknowledged, could have evaded the observation of men so able and so inquiring.

Or could there be a different solution and explanation of this omission by the writers, up to a certain period, in reference to this special form of tertiary disease? Can the change arising out of the introduction of the non-mercurial treatment of primary ulcers have produced a modification of the progress and course of the constitutional disease, when not eliminated from the system? Is it the consequence of the non-interference with the law which governs this disease in nature, uninterrupted by art? If such forms of development of

\* In the autumn before Dr. Todd published his 'Clinical Lectures on Syphilitic Disease of the Dura Mater' he paid me a visit in Belfast, on which occasion we fully discussed the subject. I told him I had offered, for publication, a paper on the disease, in the year 1847. We had the most perfect uniformity of views on its nature and treatment. An accidental meeting with Dr. Neligan gave publicity to my paper in 1852.

tertiary symptoms did not appear during the general employment of mereury for primary and secondary consequences of venereal ulcers, then we could, doubtless, conclude that the non-mereurial treatment has revealed to our knowledge a more distinct and clear portraiture of the progress of the poison in the human system by universal contamination and death, and so assimilating the description of "*lues venerea*" more to that of Van Swieten than of John Hunter.

In support and confirmation of my own experience of the formidable and deplorable effects of syphilis in the human constitution, I would call the attention of those who have a limited practice in this class of diseases to the testimony of an army surgeon,\* who reports the result of the present management of this malady on the large scale of a military hospital.

"Regimental surgeons are well aware how often the finest men in their corps are affected with venereal disease—how many such men have their constitutions so much impaired as to render them incapable of duty, either for a considerable time or permanently; and that a very large proportion of soldiers are annually discharged from the service, directly or indirectly, owing to the effects of syphilis." And he goes on to say, "I apprehend that statistics, deduced from documents at Chelsea, would afford very conclusive and startling corroborations as to the great cost incurred by the loss of the services of young soldiers, arising from syphilis; and cases in which the seeds of hereditary and other forms of disease have been brought

\* Frederick Robinson, M.D., Battalion Surgeon, Foot Guards, 'Medical Times and Gazette,' March, 1859. See Appendix, page 100.



into action by the taint of syphilis, would render the total of men discharged, directly and indirectly, from the effects of that malady, still more formidable." "And too often the unfortunate offspring suffer for the sins of their parents, in stunted growth, scrofula, and other constitutional affections."

This testimony of an army surgeon of experience offers no ground of congratulation on the success of medical science, or any proof that the treatment of syphilis without mercury is an advancement and an improvement on the treatment by mercury. On the contrary, it is an irresistible proof that constitutional disease abounds to a frightful degree at the present time; and certainly my recollection of the result of the former treatment of primary ulcers in private practice by mercury is, that it was not attended with this most unfortunate event on uncured patients in anything like the proportion that latterly and now exists.

To a man who has had the misfortune to contract the primary ulcer from impure intercourse, it is to him a most momentous question whether the best and most effectual means shall be adopted and used to avert a constitutional disease, that may embitter all his future life, transmit disease and misery to his offspring, or even terminate his own existence by a death so repulsive to the mind to contemplate.

To take so gloomy a view of the subject of tertiary syphilis, I trust, may not be regarded in any way inconsistent with an impartial spirit of inquiry into the nature and treatment of this complex disease; but, by showing how often such unhappy cases may be submitted to one man in the course of a private practice

(entirely distinct from a *speciality*\*), and in most instances the nature and source of sufferings being imputed to causes differing from the real one—syphilis.

I shall report the cases in the following succession:—First, those cases which had a fatal termination; secondly, those which had been of remarkable tenacity and protraction; thirdly, those in which the spinal meninges were concerned; and, fourthly, a case of singular progress, distorted and masked by quotidian ague.

### *Cases of Fatal Termination.*

CASE I.†—Owing to the nature of his business, Mr. D. F— was often detained from Belfast, for weeks at a time. In 1854, on one of these occasions, he was absent for six weeks, superintending workmen; while so employed he was attacked by cranial pain, such as he had learned to combat and overcome by the usual large doses of hydriodate of potash (twenty grains three times a day). He had no medicine with him, and persevered, notwithstanding his sufferings, till he had completed his object, and then returned to Belfast. Soon after his arrival at home he was attacked with inability to move his lower limbs; he became delirious. His scalp was blistered; hydriodate of potash, which had so often subdued his suffering, failed, and I used mercury. After a long struggle his intellect was restored, but his limbs remained permanently paralysed.

\* Speciality here means, no special character for a particular class of diseases, as eye, ear, chest, stomach, syphilis, &c.

† ‘Dublin Quarterly Journal of Medical Science,’ February, 1852.

He recovered so far as to be dressed, and lie on a sofa during the day, and direct his business by personal communication; but in about eight months his vital powers succumbed, and he gradually sunk, a victim of constitutional syphilis. His life, I have no doubt, was cut short by his resolutely enduring his cranial suffering without interposing promptly with the appropriate treatment.

I regret I cannot perfect this case by supplying a post-mortem examination.\* I think I would not have been disappointed in my anticipations of finding extensive thickening of the dura mater, over the superior aspects of the cerebral hemispheres, and involving the arachnoid, the pia mater, and, probably, the subjacent cortical convolutions; and that the pons varolii and crura cerebri had equally suffered by extension from the disease of the dura mater at the base of the skull. This was the first case in which I made positive diagnosis of a *node* within the skull, in 1846—although the case which guided me in this diagnosis I met with in 1837, and which I now publish.

CASE II.†—This case also had a fatal termination, but under a different progress of disease; no paralytic symptoms, or epileptic or cranial pains, recurred. With the outward semblance of vigorous bodily health, and for a long time an inordinate appetite, his mind under-

\* Vide Todd 'On the Nervous System,' second edition, post-mortem, pages 393 and 401. 'Medical Times and Gazette,' January, 1859.

† See Case III, 'Dublin Quarterly Journal of Medical Science,' February, 1852.

went a gradual and progressive alteration. From being a man remarkably distinguished for good manners, great courtesy, and eminent social tact and address, belonging to the best class of society, amongst whom his company was constantly sought, he became morose, silent, and, when he did speak, apt to use offensive and coarse expressions; all this directly in contrast to his former character and natural manner; he provoked to separation, or withdrew himself from his intimate and real friends, and latterly became solitary and desponding, lying in bed, without complaint of any disorder, till 4 o'clock in the afternoon. By accident, a servant entered his room at an earlier hour than usual (2 p.m.), when he was discovered in a state of insensibility. The medical gentlemen summoned to visit him, on the emergency, failed to restore sensibility, and he sunk comatose.

There was not any post-mortem; but, from the previous history of his case, when I reflect on the former class of symptoms—at one time epileptic, at another in a state so apathetic and silent as to approach nearly to lethargy, followed by a short period of absolute mental derangement—no doubt is left on my mind that the dura mater covering the superior convolutions of the cerebellum would have shown the chief morbid signification.

CASE III.—In 1853 Dr. Joseph Bryson (now deceased) brought me to visit the wife of a person in respectable circumstances in Belfast. She was suffering from intense cranial pain, want of sleep, great debility, and loss of appetite; she was very anæmic, and

altogether presented an aspect of marked cachexia. Dr. Bryson informed me that she had received venereal infection, some years previously, from her husband; that the treatment for the primary sore had been ineffectual; secondary symptoms followed, and on these supervened a thorough constitutional contamination. He had treated her, accordingly, for various outward manifestations of tertiary syphilis. She bore many cicatrices of former rupia; had nodes on the tibiae, with syphilitic swellings of several articulations. In a word, she was a victim of confirmed, and probably incurable, tertiary disease. Dr. Bryson had been treating her with the hydriodate of potash, from time to time, with the mitigation or arrest of symptoms. He was then using quinia and sedatives, at night, but without any decided relief. I recommended him to return to the exhibition of the hydriodate in ten-grain doses every sixth hour, and in the intermediate period to give full doses of iron. I saw her with Dr. Bryson again in about ten days, and found her greatly amended, in so much that I could scarcely have recognised her. I saw no more of this patient for about three years, when I met another physician in consultation. I then found that anasarca had complicated her anæmic condition.

We agreed to send her to some friends in a rural situation, where she would obtain fresh air, a full milk dietary, eggs, and fresh meat; for medicine, we principally relied on iron to amend her anæmic state, and indirectly overcome the disposition to serous effusion.

I heard no more of her till I saw the announcement



of her disease, assuredly the termination of syphilitic cachexia, about six months after the last interview.

CASE IV.—September, 1846, I was sent for to visit a young officer in the barraeks, who had recently returned from the Crimea. While engaged on a court-martial he was suddenly deprived of the power of speech, and at the same time suffered exquisite pain of the head. The staff-assistant surgeon, Dr. Buckley, had him immediately conveyed to his room, and placed in bed; but, feeling great difficulty as to the course of treatment he should adopt, refrained from active measures till settled in consultation. Dr. Buckley informed me that this gentleman had told him (before this attack), when he consulted him, that he had been treated for a primary sore by mercury just before his regiment was ordered to the East. He soon exhibited secondary symptoms, sore throat, and eruption, in the East, when he was again treated with mercury. He then underwent all the hardships of the trenches—night work, wet, bad food, cold, and misery. He suffered what were considered rheumatism pains in his joints; but the gallant youth never gave up his work till he had been wounded in the forehead by a glancing bullet at the memorable assault of the Redan (18th of June); he was sent home; the wound remained long open. Dr. Buckley pointed out to me the thickening of the periosteum of the internal malleolus and of the shaft of the tibia. Dr. Buckley, at the time, was treating him with five-grain doses of hydriodate of potash. I had no hesitation in agreeing with him that we had no justification for any depletory measures. The same medicine

was continued, and given in ten-grain doses every fourth hour, and a blister applied to the nape of the neck; beef-tea, and farinaceous food. The loss of speech was clearly depending on want of power to govern the mechanism of articulation.

Sunday (the next day), little change; but, if anything, better, though little sleep, and night restless, in pain. The doctor never left him all night. Continue treatment. Blister rose well; dress with mercurial ointment.

Monday.—Improved; can speak a little in a very feeble voice. Continue treatment. 10 a.m.—Certainly better; can bear the admission of light into the room; blister discharging freely. Dr. Buckley sat up during the night; his attention has been unremitting.

Tuesday, 10 a.m.—Quite recovered, all pain of the head gone.

The officer had received leave of absence, to go to his friends in England, and I gave him a letter of brief statement of the case to a surgeon of St. Thomas's Hospital. I did not see him again, but I may here copy the concluding paragraph of notes written at the time:—This young gentleman will, most likely, suffer a long period of syphilitic cachexia, before the constitution, aided by all the best powers of judgment and art, can restore it, if ever.

I conclude this case with the information received while arranging my notes for publication, that this unfortunate young officer has just died.

*Cases of Constitutional Syphilis protracted through years.*

I find I must condense my notes of the following cases, by merely relating their salient points, restricting myself principally to the display of those symptoms which mark the invasion of the cranial contents, by the progress of the tertiary stage of the contamination of the fibrous membrane within the skull, spreading to the coverings and brain itself, comprising the functions of the nervous centres; and, if not arrested, causing irreparable injury, manifested in organic or structural demolition.

CASE V.—I first examined this gentleman in 1844; he came to me with a sarcocele of one testicle. He had been treated for primary ulcer and for secondary symptoms. For years he showed no symptoms of manifest syphilitic indication; but the disease was latent, and he has suffered manifold invasions of cerebral disease, affecting mental power, vision, hearing, motion, and several times paralysis; and all have been, as yet, overcome by the early application and attention to treatment. In this case I am encouraged by the expectation that the poison is wearing out in the body, as, for a considerable period, the attacks have been less violent in character, and increasingly amenable to remedies, of which the hydriodate of potash is the principal.\*

CASE VI.—I saw this case first with a cicatrized in-

\* Case V has had a perfect recovery.

duration at the junction of the prepuce and glans penis ; it was a perfect crescent, of cartilaginous firmness, and a sixth of an inch in thickness at its centre and upper part. He had papular eruption, and had been treated, in London, by the late Mr. Welbank ; I treated the case with mercurial inunction, though confinement was with him impossible. All symptoms were removed—induration, eruption—in about two months, and treatment ceased in three months. Two years after, he was leaving for a voyage to Greece, when he called on me with a recent infection, within four days of supposed contamination. I cauterized the sore with caustic potash most liberally. If cauterization could destroy, it was deeply and perfectly done. He was absent nearly one year ; he had been treated abroad for an eruption ; he became my patient again, with distinct tertiary eruption and cranial pains. For nine years he has undergone repeated attacks, so repeated as to be almost unremitted—the intermission of those much briefer than the illness. During this terrible and protracted disease he has had the advice of Sir B. C. Brodie, Mr. Acton, Mr. Cusack, M. Ricord. It is needless to say they all acknowledged the disease, and we no way differed in treatment ; all the preparations of iodine have had their turn ; mercury too ; iron, quinia, cod-liver oil ; we have possessed ample space, and verge enough, for all imaginable modes of treatment. The only means omitted, which I could never prevail on him to employ, was mercurial fumigation. When last I saw him he was free from all disease, had married, and has, I am assured on sound authority, healthy progeny. Since the marriage he became my patient again for phagedænic

syphilitic ulceration twice, of a very extensive and serious character, attended with intense pain. He recovered well, however, and has since been free from disease.\*

CASE VII.—I saw, in consultation with an excellent and specially well-informed surgeon on venereal diseases, a gentleman with a primary sore, within eight days from first appearance; it was being treated with a weak escharotic wash, its syphilitic character being doubtful. I considered it specific, and advised mercury internally; in a fortnight it healed. Within six weeks the same patient called on me to show me his throat, which was attacked with superficial ulceration. The patient, who is naturally of a very timid, nervous temperament, immediately after we saw him went to Dublin, to obtain the opinion of a surgeon of high character and great experience. He opposed the mercurial treatment which I had advised, and his symptoms disappeared under the palliative treatment. But in due course tertiary symptoms made their appearance—cranial pains; various organs, sense, motion, and mental power, have suffered in succession. The surgeons of London, Dublin, and Paris, alternately receive his visits; and he continues his wanderings from surgeon to surgeon, a miserable and disconsolate man.

\* In Dr. Todd's case of Begbie ('Nervous Diseases,' second edition), he refers to the question of the state of his progeny, as of particular interest. The question is here answered in confirmation of the attestation of M. Ricord—that the tertiary disease is not infectious, or transferable, as secondary forms. There is another question of practical interest—was it from the indurated or the cauterized sore the tertiary disease appeared? Ricord and Aeton would affirm the former.



As these three cases last related are fair, and by no means rare or exaggerated, examples of confirmed constitutional syphilis settled in the human frame, rendering existence painful and anxious, poisoning life, by depriving the sufferer of his natural energies of body and mind, it would be useless to multiply cases further of this class. I may say, "ex tribus disce omnes;" and in truth you see them in flocks, at once recognised by the "facies syphilitica," in all the popular or fashionable sanatory resorts—water cures, Turkish baths, and other more legitimate and recognised agents of restorative action, mineral waters, which attract the sick and the idle.

CASE VIII.—*Syphilitic Meningitis of the Spinal Marrow.*

The surgeon of a regiment quartered in Belfast came to me, accompanied by an officer of his regiment, whom he felt anxious about, on account of a regular but progressive loss of sensation in the abdominal walls; it was now spreading down the thighs, accompanied by diminished power of the lower limbs in walking, with weakness of the knees—in short, he and the patient both feared an ultimate development of paraplegia. This gentleman, who, except that he was pallid, had otherwise no mark of disordered health, had been for more than eighteen months under the care of an hospital surgeon of Dublin, who successively treated him for primary ulcer, for secondary symptoms, and latterly for tertiary symptoms. He was at that time taking the hydriodate of potash, 5 grs. three times a day. I was so convinced that this was a case in its essence identical

with the syphilitic meningitis of the brain, only transposed to the fibrous covering of the spinal marrow, I advised the increase of dose of the hydriodate to 10 grs., and no other medication. Within three weeks the disappearance of the symptoms was complete, and I know he had recovered well a year after.

In confirmation of this interpretation of the case, I copy the following from the 'Lancet,' May 12th, 1860:—"Professor Trousseau has in his wards a patient who contracted chancre five years ago—for which he received no treatment. He now suffers from periostitis, complicated with paraplegia. Ricord also recognises forms of paraplegia among tertiary accidents."

CASE IX.—*Case of Tertiary Syphilis complicated with Quotidian Ague.*

In March, 1837, I was required to visit a military officer, who was home on sick leave, having being on service in the Ionian Isles for eleven years. He had, after a period of ten years in that country of uninterrupted health and vigour, contracted the malaria epidemic there, which assumed the quotidian form. The disease being unrelieved by the treatment adopted there, a medical board sent him home on sick leave, after nine months' futile medication; he came to London, where he again received medical advice, then in Dublin; and finally, not far from his own residence, he consulted a physician in Belfast. No diminution of his sufferings followed; fever, emaciation, debility, continued to wear him out, and I was summoned to supervise the struggles of impending death.

He described to me a daily accession of eighteen

hours of fever—a cold, a hot, and sweating stage; six only of remission. The remission of six hours, for food and rest, was a poor credit account against a debit of eighteen of waste. The emaciation was consequently frightful; wonderful how he could have existed under it, even for eleven months. He informed me that he had for a long time being unable to stand, from swelling of his ankles. On examination there was great tumefaction of both internal malleoli; there was a soft tumour on the os frontis, which he told me had been lanced by an army surgeon; another, larger, but similarly containing fluid, was on the left parietal bone. I then proceeded to examine the state of the liver and spleen, the usual pathological seat of morbid evidence of malarious poisoning; there was not the slightest tumefaction of either, nor of effusion into the peritoneal cavity. I then put to him this direct question—When had he venereal sores? His reply, Never!! I felt puzzled, but had no course left but to accept the case as one of ague with anomaly, under his solemn and repeated denial of venereal contamination. Twenty-grain doses of quinia during the remission for some days checked the severity of the fever and improved the appetite; but he soon retrograded to the former state. I had him then removed, by easy stages, eight miles a day, in a reclining posture, to a relative's house, near my own residence. I then commenced a graduated course of arsenical solution, under which he again improved; he took at the culminating dose ten drops three times a day, but receded again. I then sent him to a dry, sandy soil, on the sea-coast, where no malaria could be supposed to exist. He was in an excellent hotel. The

precipitation and impending fatal termination were evidently not remote; days, not weeks, must measure the time. On my morning's visit, after days almost without food, nights without sleep, and the sense of his approaching end, he said he had remembered, during the watching of the night, that an affair had occurred just as he was sickening of the ague, and which had escaped his memory—though, he believed of no moment; he would tell it me. “Just at this *particular time*, he had accepted the tender advances of his Greek landlady. Not many days after, he showed a trifling abrasion on the penis to the surgeon in attendance on him for the intermittent fever, who cauterized it; it healed immediately, and was never again presented to his mind until the previous night.” I at once said, “That is enough for me; I'll give you a chance for your life; I'll immediately use mercury”—he at once consented. I had been reading, not long before, Mr. Colles' directions for the use of mercury in venereal heat. I directed his servant to rub in a paper of mercurial ointment (15 grs.) inside the thigh once a day; made him take food as usual, such as he could swallow. The second night he slept throughout the whole night—deep, sound, refreshing repose; he knew hunger (for breakfast) a stranger to him for many months; he sat up in his room the third day; appetite insatiable, could walk well, but for the feeble degenerate muscles—his ankles bearing his weight. No man ever beheld a higher triumph of medicine. No tonic ever equalled the magic power mercury evinced in this case. If it be not the specific for syphilis, the world has none. But the recovery was not without its vicissitudes and its delays—a disease so



engrafted into the system could not be erased in a day, nor by a single remedy. He brought on an attack of rheumatism by sitting out on the rocks, under the temptation of the most charming weather of the month of May and the superb scenery of the coast of Antrim, one evening; this, of course, stopped for a time the specific treatment; then he had rheumatic scleritis—but never again the ague. The amendment, though occasionally interrupted by further tertiary symptoms—sarcocoele, a node under the biceps of the humerus, tumefactions, and pain of knee-joints—was progressive, and in eighteen months he was a perfectly sound, healthy, robust gentleman; married a young lady; at sixty has a fine healthy family, and is an officer of rank in her Majesty's service.

In this case the secondary symptoms appear to have been entirely obliterated by the presence of fever, and the hectic of syphilis assumed the quotidian form. The fibrous covering of the bones must very early have taken the syphilitic action, for the abscess over the frontal bone was lanced by a military surgeon in Corfu. It was from my reflections on the course and history of this case that I was led to see the high probability of the internal fibrous membranes participating in the syphilitic contamination; but I only fixed and determined the fact in the case of Mr. F—in the year 1845, the fatal conclusion of which I have recorded in this paper.

I have before observed that in writings on the venereal disease the deaths from syphilis have not been recorded; and Mr. Colles, in his admirable work on the venereal disease, states that, when fatal, it is usually of diarrhoea, dysentery, dropsy, or some of the diseases of



exhausted and worn-out constitutions, that the patients die;\* but he gives no example, and, as I remember, refers to no case of paralysis, or any other case of disease from syphilitic action on the brain and nervous system. It is probable that few surgeons would have countenanced me in this crisis (Case IX); but I am justified in the result, and am fortified by the testimony of the employment of mercury in tertiary syphilis by Mr. Solly.—Case XXVII.—“The patient, named Hawkins, had long been suffering from secondary syphilis. He had been in the house some months before he came under my care. He had necrosis from nodes of portion of the frontal and parietal bones, but without any symptoms of cerebral disease, or even irritation. I happened, however, to remark to the pupils that such cases were not unattended with danger, as inflammation of the dura mater, arachnoid, and pia mater, sometimes suddenly supervened, and the patient would then sink from such effusion. About two days after this I was called to him, in consequence of his becoming drowsy and stupid. When I arrived I found him not quite insensible, but scarcely able to answer any question when roused; and, when left undisturbed, he was in a semi-comatose condition. I immediately ordered five grains of calomel every four hours, a blister to the back of the neck, and to be dressed with strong mercurial ointment; he got rapidly worse, and soon became insensible; but in twenty-four hours the mercury began to take effect, and it was most delightful to see the rapidity with which the cloud was again removed from his intellect. In forty-eight hours he was sensible enough to answer

\* Vide Colles ‘On Venereal Disease,’ p. 11.

questions, and ultimately quite recovered. It was also interesting to observe an immense improvement in all his syphilitic symptoms; his nodes became healthy, and some large rupial sores which he had on his thighs and legs began to heal, and progressed most favorably. Previous to this attack he had been taking the iodide of potassium and sarsaparilla, and a generous diet.”\*

This case fully supports my statements that the hydriodate of potash will often fail us in tertiary syphilis, and we must have recourse to mercury; we are not to be bound by an inflexible rule, that no mercury should be used for tertiary symptoms.

Dr. Todd also gives his opinion as follows:—“In such cases we must trust to the repeated use of iodine, as one element of cure; and we may aid the influence of the iodine by the occasional use of mercury, either at the same time with the mercury or, as I prefer it, alternately.”†

I cannot conclude this very important subject—an endeavour to extricate the entanglements and difficulties of the natural history of syphilis—a subject which has employed the minds of the ablest men who have ever practised medicine, and yet is still enveloped in obscurity and doubt—without referring to the very primary sign of the disease. For admitting the general acknowledgment of induration as a fixed and significant test of a contaminating ulcer, yet no man has been able to affirm that an ulcer without induration may not contaminate the system—even the simplest superficial abrasion may be followed by all the successive phenomena of syphilis.

\* Solly ‘On the Brain,’ second edition, 1856.

† Todd’s ‘Lectures on Nervous System,’ second edition.

It is not unworthy of commemoration that, since the work of John Hunter on the venereal disease—an attempt to systematise and explain the natural laws of this abstruse disease—was published, none have followed more closely in his steps, nor examined his doctrines in a spirit more akin to that of the great naturalist, than members of the Irish School of Surgery.

Mr. Richard Carmichael, with great originality and boldness of conception, promulgated the non-mercureal treatment of syphilis; he supported his precepts with great ingenuity and arguments drawn from cases demonstrative of the truth of the doctrine. His doctrine rapidly spread, and won converts and followers amongst the profession in all the chief cities and schools in Europe. But it had not universal acceptance, and, especially in Dublin, it did not pass without challenge, as it was subversive of the teaching of John Hunter on two leading positions—the unity of the animal poison, and its perpetuation in the human system unless arrested by the action of mercury.

Mr. Abraham Colles, a man whose mind was trained and formed in the study of Hunter's works, received the new doctrine with the philosophic caution and scrutiny which was the element of his mental conformation. He, as Hunter himself would, at once bestowed all his penetrating sagacity, his deliberate judgment, and inimitable power of observation, to the examination of the truth and substantiality of the doctrine.

The result of that calm and deliberate inquiry is contained in his work on the venereal disease—a work worthy of the man and the school which he so long adorned as the Professor of Surgery; for clear and

comprehensive description, faithful narrative, and depth of reflection, it cannot be surpassed. That portion, especially, which refers to the use of mercury deserves more particularly to be commended, being, indeed, on this subject, the best work extant.

To their joint works may be traced all the elements of subsequent experiment and research into the natural history of syphilis ; and, accepting M. Ricord as the interpreter of the present state of opinion of this important disease, certainly the most abstruse and complicated within the range of medicine, and receiving his treatment as that most generally established, it shows that experience is leading men back more nearly to the text of Mr. Colles, and to the restoration of mercury into its former place, as the sole remedy for syphilitic disease, namely, true primary (whenever that may be discovered), and for true secondary disease, which cannot be mistaken.

I shall close with the words of the first authority living in surgery,\* referring to his own belief in the power of mercury judiciously used :—" You will, I am satisfied, make, in the great majority of cases, a real and permanent cure of the disease. You must not suppose that we have advanced alike in all the departments of surgery ; indeed, I am sure that in some things we have gone back, and this is one of them."

\* Sir Benjamin Brodie, 'Lectures on Pathology and Surgery,' 1846.

## III.

## TERTIARY SYPHILIS.

*Third Series.\**THE GROWTH, PROGRESS, AND PRESENT STATE OF  
KNOWLEDGE OF NERVOUS SYPHILITIC DISEASES.

IN two former articles, published in this Journal, I endeavoured, by the recital of cases submitted to my treatment, to exhibit to the profession certain forms of nervous diseases connected with the advanced or later stages of constitutional syphilis, and by so doing to direct attention to a serious error usually taught in our surgical schools—"that the brain was in no way susceptible of the constitutional poison of syphilis." This error is now, or quickly will be, universally exploded by a true interpretation of the facts bearing on the point that have been adduced by many competent observers of the phenomena attending syphilis in its later stages.

As the first series of cases which I gave for publication, and denominated syphilitic meningitis, had been diagnosed and treated some years before the publication of Dr. Todd's important and valuable clinical lecture on the same subject, and as our descriptions of the clinical facts nowise differed, and were the results of observations made separately, at distant places, and without inter-communication, they afford strong testimony that there had been no inaccuracy or misapprehension on

\* See 'Dublin Quarterly Journal,' vols. xiii and xxx, for first and second series.



either part—in fact, that the diagnosis had been sound and reliable.

A large measure of the notice my first paper has received I cannot fail to ascribe to the connection of Dr. Todd's name with the same subject. His position, eminence, and high repute with his profession, secured readers, and an interest in every subject he placed before them. His precedence, no doubt, prepared the minds of those who are not chained to the chariot wheels of authority to continue their inquiry, indifferent to the place whence or from whom contributions to knowledge came, "*de augmentis scientiarum*," a needful memorial for all physicians.

In order clearly to submit the whole matter to the minds of those who study disease with the object to attain a secure and fixed diagnosis, I will commence my researches into the growth, progress, and advancement of our knowledge of syphilitic disease, connected with the brain and spinal marrow, by quoting the opinions and decisive judgments of John Hunter and Sir Astley Cooper, as they have been recorded.

"Some parts of the body are incapable of being acted upon by the venereal poison, as the brain, heart, and abdominal viscera ; indeed, the venereal poison does not appear to be capable of exercising its destructive influence on the vital organs, or those parts most essential to the welfare and continuance of life ; but the bones, muscles, and skin, readily partake of its malignant nature."\*

"But it would appear that some parts of the body

\* Sir Astley Cooper's '*Principles and Practice of Surgery*.' By Alexander Lee, A.M., M.D., vol. iii, p. 140, 1843.

are much less susceptible of the lues venerea than others ; and not only so, but many parts, as far as we know, are not susceptible of it at all. For we have not yet had every part of the body affected ; we have not seen the brain affected, the heart, stomach, liver, kidneys, nor other viscera, although such cases are described in authors.”\*

I now proceed to detail, *seriatim* (by dates), the opinions of British surgeons, from their writings, who dissented from those authorities :

Mr. Benjamin Bell was a contemporary of John Hunter, and thus expresses himself :—“ The diseases induced by the venereal virus, of which I shall give instances, are phthisis, asthma, rheumatism, dropsy, headache, epilepsy, and mania.”†

Dr. M'Dowell, of Dublin, in the ‘ Dublin Hospital Gazette,’ April, 1854, has contributed a case of great interest :—“ Syphilitic Meningitis ; Incomplete Paralysis ; Disturbance of Mental Functions ; Treatment by Mercury ; Recovery.—Philip Reilly, aged twenty-two, a sailor, admitted for rheumatic pains. Inquiry proved to be connected with syphilis. *Eight months* previously the patient contracted syphilis ; the primary

\* John Hunter's Works, by Palmer, vol. ii, p. 396, 1835.

† Benjamin Bell, ‘ Treatise on the Venereal Disease,’ vol. ii, p. 460, 1793. Dr. Budd, King's College Hospital, “ Cases of Apoplexy consequent on Syphilis,” ‘ Medical Gazette,’ 1842. Dr. Inman, Liverpool, “ Cases of Paralysis dependent on Syphilis,” ‘ Medical Gazette,’ 1843. Dr. R. B. Todd, King's College Hospital, “ Clinical Lecture on Syphilitic Meningitis,” ‘ Medical Gazette,’ January, 1851. Dr. Thomas Reade, Belfast, “ Notes on Syphilitic Meningitis,” ‘ Dublin Medical Journal,’ February, 1852.

sore healed without treatment, mercurial or otherwise. Three weeks before admission the eruption made its appearance. Ordered  $\mathcal{R}$  Misturæ Potassii Iodidi  $\mathfrak{z}$ j, ter in die. He improved rapidly for some days. January 10th.—On previous day patient affected with partial loss of power of the lower extremities and of the right upper extremity; during the night had been delirious; pupils dilated; vision impaired; there was more or less general paralysis; the face slightly distorted; the mouth drawn to the left side.

“*Treatment.*—Calomel and James’s Powder in small but repeated doses. 13th.—Ptyalism established; no distortion of face; speaks more distinctly. 14th.—Pupils natural, contract briskly; still walks very unsteady. In February he left the hospital in perfect health.

“*Remarks.*—Though cases such as the one last described are not very frequently met with in practice, their nature and true import should be thoroughly understood and investigated, as on a correct interpretation of symptoms the success of treatment mainly depends.

“That cerebral symptoms are rarely of syphilitic origin may be inferred from their not being described in the best monographs on syphilis.\*

“Hunter states the brain is one of the organs exempt from the effects of syphilis. Ricord alludes to epilepsy, but not to any other form of cerebral affection, in connection with syphilis.”

I have extracted from this very characteristic and interesting case at considerable length, as it contains

\* John Hunter, Carmichael, Colles, Ricord.

several important subjects of reflection. 1. How a simple and indefinite ulcer may enter and poison the system; the long interval between the poisonous infection and the constitutional irruption; the impotency of iodide of potassium in profound nervous attacks; the rapid restoration under mercurial action. 2. The expressed opinion on the rare occurrence of cerebral complications. There can be no doubt the cases must have been, at all periods, in existence, but overlooked and discredited, or believed to be independent intercurrent disease, but entirely distinct from syphilis, when that was plainly manifest; the character of the infecting ulcer is still unknown—the complications of constitutional nervous disease only newly entered on as a study.

In December, 1855, Dr. M'Dowell, in 'Dublin Hospital Gazette,' gives another case of syphilitic meningitis in which he seems to be more satisfied of the existence of a pure meningitis, arising from the fugitive character of the symptoms, the recovery showing the restoration of the functions of all the parts previously impaired. The case.—Pat. Connor, aged twenty-two, April 12th, 1854. Syphilitic paralysis affecting sensitive portion of right fifth nerve and third nerve of the same side:—"I believe we have here a syphilitic affection of the fibrous membranes enveloping these nerves, or of the fibrous periosteum lining the foramen through which they pass. The patient gives the history of syphilis, and other symptoms which are referable to this taint; we find that his mind was affected, that his memory was much impaired, and that there was a listlessness about him, a stupidity that we can now see was not natural

to him. Since the patient was a second time under observation, as confirmatory of this opinion, that he suffered severely from nocturnal pains, and that a tender puffy spot, as large as a crown, existed over the internal aspect of the right occipital bone—in fact, syphilitic periostitis. On this supposition he was treated.”

That the partial paralysis in this case did not depend on central disease of the brain, or intercranial tumour, is proved by the progress of the case, you observe:—“The lesion of the fifth nerve has disappeared; the levator palpebræ is no longer paralysed; corresponding with the gradual disappearance of the partial paralysis the general health has much improved; his apparent stupidity has disappeared, he is cheerful and intelligent, his memory is no longer defective, and the periosteal pains and swellings have also vanished.”

The next notice I find in connection with this subject is related by Mr. B. Wills Richardson, in ‘Dublin Hospital Gazette,’ April, 1856. A case of meningitis, osteitis, and periostitis. It was a female, of abandoned life, an inmate of the South Dublin Workhouse. She broke up, cachectic from neglect, and died in hospital. The following were the post-mortem evidences:—“On removing the scalp a small carious node was perceived in the left parietal bone, corresponding to the situation in which she complained of tenderness during life; when the calvarium was taken off the dura mater was seen to be very vascular, and perhaps more coherent to the inside of the skull than natural. On detaching this membrane from the parietal bones we found the greater part of the latter very vascular, rough, and



porous. In the part that corresponds to the node the bone is thin, blanched, and diaphanous. The whole of the arachnoid membrane was excessively opaque, particularly that portion investing the external surface of the hemisphere of the brain; the pia mater was very much congested, and the brain itself was slightly vascular."

This case and post-mortem afford, I consider, a fair example of the unchecked course of syphilitic external periostitis, with the same affections of the fibrous membrane lining the skull and investing the brain, involving the arachnoid and pia mater, and still further engaging the surface of the brain; a degree further of advance and the depth of cortical substance would exhibit purulent deposit and softening. Such I believe is the ordinary course and progress of these cases unless arrested by specific treatment; at the same time there are surely other forms of intercranial syphilitic disease or deposits on the dura mater, as well as in the body of the cerebral matter.

In order of succession by date the next reference will be found in the 'Dublin Quarterly Medical Journal' for November, 1860—"Cases of Tertiary Syphilis," by Thomas Reade. Eleventh article.

It contains a series of nine cases, all being in the course of private practice, which has conferred the signal advantage of having a full knowledge and observation of nearly all till their decease, with the alternation, relapses, and in several of apparent perfect restoration. On the retrospect of these nine cases I entertain a very strong conviction that two of the cases, number one and three, now deceased, lost their lives

by neglect; all the cases of far less vigour of constitution, and of less promise, have weathered the storm after years of renewed attacks, by prompt submission to treatment. The opulent classes are exempt from the harassing occupations, privations, and the depressing agencies which invade the usual denizens of hospitals, causes which induce an associate cachexy; and recovery is obstructed by the tardy and involuntary resort to hospital for aid.

The latest contribution in Dublin has been from Dr. Duncan ("Cases of Syphilitic Insanity and Epilepsy." 'Dublin Quarterly Journal of Medicine,' February, 1863).

I shall now seek out the evidences by which we may determine in what degree, and at what time, the medical faculty of London have participated in this new and important inquiry.

The first publication that I find in the London periodic medical literature is in the 'Medical Times and Gazette' for June, 1861 ("Reports of Hospital Practice, by Jonathan Hutchinson and J. Hughlings Jackson, M.D. Syphilitic Affections of the Nervous System").

"*Cases of Epilepsy associated with Syphilis.*—The following cases of epilepsy, in each of which there is a clear history of syphilis, will, no doubt, be interesting to our readers. Although this subject has received much consideration from several English observers, amongst whom we may mention Dr. Graves, Dr. Todd, Dr. Reade of Belfast, and Dr. Inman, yet the connection between the two affections is not yet so widely recognised as is desirable. Case I.—Syphilitic caries of left parietal bone; convulsive attacks, chiefly of the right side, unattended with loss of consciousness, but

followed by hemiplegia of the right side; relief by trephining; death; autopsy. The case was a patient of Mr. Bryant's, in Guy's Hospital. Syphilitic deposits were found in the testes, liver, and spleen. Case II is from Dr. Todd, and Case III from Dr. Reade, Belfast. Case IV.—Under care of Mr. Hulke, November, 1858. Node on the margin of the orbit, causing diplopia, displacing the eyeball; cure by the iodide of potassium; afterwards again treated for epileptiform convulsion; persistent fixed pain over parietal bone; recovery under iodide of potassium; remains well.—February, 1861.

The cases recorded in the 'Medical Times and Gazette' by Mr. Hutchinson and Dr. Jackson are very numerous—supplied from many sources; extracted from publications and reported by many physicians—several London hospital surgeons, so that there is now no lack of labourers. Several of the cases are of great interest, independent of the recognition of the nervous syphilitic disease in the individual of the primary contagion, and showing its inroads upon the eye and ear—all the nerves connected with sensation, as well as motion—in fact, every cerebral nerve. Mr. Hutchinson has traced to hereditary syphilis certain characteristic marks upon the teeth, the cornea, and iris; and also the sequence of epilepsy, paralysis, and idiocy, to the inherited poison transmitted at birth.

It would be now useless to follow up in detail cases so numerous, but their number now show how strong and secure a hold has been made on the mass of the physicians and surgeons of London. None seem to uphold the opinion of Hunter and Sir Astley Cooper; it can only excite our wonder how they prevailed,

blindfolding men who prided themselves on their clear and independent powers of observation, and whose abilities, as exhibited by their writings, show at the same time how just was that high repute they had attained in their generation ; and that the highest faculties are still unequal, subject to error, prejudice, and unconscious delusion.

Dr. Brown-Séquard, in one of his lectures on diseases of the nervous system, in addressing his class in reference to paralysis of any of the cerebral nerves, distinctly states that, if the patient had only had a primary ulcer, that testimony would be sufficient to satisfy him, and decide on treating the case as syphilitic. I have in the course of practice seen cases, and treated them, that would scarcely sanction so sweeping and wide a proposition. We must always bear in mind that the syphilitic patient has no immunity from intercurrent disease, which is due to other and different causes. We may meet with cases of Sir C. Bell's paralysis of the portio dura in a man who has had syphilis, yet it may be unnecessary to give specific treatment ; tumours within the skull may not be syphilitic. It is not uncommon to employ mereury in those cases, but its use is purely empiric, and reflects no credit on diagnosis.

The task which I have imposed on myself would be incomplete and imperfectly executed did I not apply the same tests by examination of the growth, progress, and present state of knowledge, as shown by publications in the capital of France on the same interesting subject—the nervous diseases excited in the human frame by the syphilitic poison.

In order to accomplish this object I am necessarily guided to the lectures of M. Ricord, till lately surgeon to the Hôpital du Midi, who, for many years, has attained great celebrity from his experimental investigations into the primary symptoms of syphilis, their nature and properties, as affecting the human system.

These labours attracted to the Hôpital du Midi a large class of pupils, to many of whom this eminent surgeon imparted his own ardour and scientific spirit of inquiry. M. Zambaco, one of his pupils, an *interne* of the Hôpital du Midi, has obtained the distinction of Civricux Prize of the Imperial Academy of Medicine of Paris, for his essay, 'Des Affections Nerveuses Syphilitiques,' published in Paris, 1862.

The work is very elaborate and comprehensive, containing a copious reference to many ancient and modern writers on the subject, with numerous cases illustrative of the various forms of the disease, and highly philosophic reflections appended to each case, which renders the whole work an instructive study for all who hereafter may seek a comprehensive knowledge of the subject.

As the majority of the cases were treated in the Hôpital du Midi, under the charge of M. Ricord, the book may be regarded as the embodiment of the doctrines and experience of M. Ricord up to a very recent period; therefore, I may assume, in the work of M. Zambaco, I am at the same time eliciting the opinion, on each topic, of M. Ricord himself.

Although cases had been reported by different physicians in France before the labours of M. Ricord had been published, showing that nervous syphilitic diseases



had not passed wholly unobserved, yet the mind of the profession appears not to have distinctly accepted such diseases as recognisable and having a distinct and separate entity till M. Ricord's own mind slowly opened to its admission. In England, until after the writing of Dr. Todd, it had not assumed a substantial acknowledgment; and, I think, there is strong reason to infer the ignorance of Dr. Todd that any such opinion had prevailed, with a known authority in France; otherwise, I am satisfied Dr. Todd would, in his clinical lectures, have noticed a confirmation of a diagnosis of disease then so novel, yet so important.

I now transcribe from the lectures of M. Ricord, published in the 'Lancet,' January, 1848, on the "Action of the Osseous Affection (Tertiary Syphilis) on the Neighbouring Parts:"

"When the tumour is situated at the base of the cranium there is paralysis of the fifth pair; but the motor-oculi may also receive compression, and when this happens all the recti muscles, except the external, are paralysed."

He then goes on to notice the effects of similar pressure on the seventh and eighth nerves. To the following passage of his lectures I specially ask attention:—"Another consequence of this species of compression is *epilepsy*; but this otherwise formidable disease is, in such cases, easily got rid of. The fits commonly seize the patient when the osseous growth producing the compression gets more considerable and irritating.

"I must not omit to mention paraplegia as a casual effect of tertiary syphilis in the bones. The nervous symptoms are, then, the result of an osseous lesion, which

latter begins by nocturnal pains, and develops very slowly. Paraplegia may also be produced by a cutaneous elastic tumour."

With these cursory and passing remarks on epilepsy and paralysis he closes his lectures on these momentous derangements in connection with tertiary syphilis—constituting presumptive evidence that, at the time of his delivery of this course of lectures, their full gravity and importance had, as yet, not impressed him with that force and significance that we find he subsequently became actuated by, as is evinced by the deep and careful study and attention shown in the elaborate care that he gave to the numerous cases he assembled and treated in the Hôpital du Midi—the cases which mainly supplied M. Zambaco with the materials on which he has based his excellent prize essay. The entire of the reasonings and proofs of his positions are sustained by reference to ninety-one cases, collected by M. Zambaco from the Paris hospitals and Maisons de Santé almost entirely, but pre-eminently the Hôpital du Midi.

I conclude, from the passing and cursory manner in which M. Ricord glances at epilepsy and paralysis, that he had not then examined the subject with the care he subsequently bestowed upon it.

I have analysed the dates of the treatment of the ninety-one cases,\* and I find that seventy-seven of the whole number had undergone treatment since 1852, inclusive; thirty-four of these in 1858 (nearly all in the Hôpital du Midi); of the fourteen remaining four have

\* I have uniformly adopted the latest date of dismissal or the decease when ascertainable; the reason is obvious—the history of cases often embraces many years.

no date, one was 1825, one 1845, the nine remaining scattered through Parisian and other French hospitals.

The conclusion I come to is this, that the subject of nervous syphilitic diseases was not taken up, as a stubborn reality, either in England or France, till after the notice it acquired in 1851 and 1852.

I can confidently appeal to a critical examination of the cases, as published by M. Zambaco, that all my comments are in no degree overdrawn, and are adduced with no other purpose except that of an historical record, connected with an advancement in our real knowledge of a most serious malady still involved in great perplexity and doubt, after 200 years of inquiry and observation; to offer anything except respect to the high talent, rare ability, and perseverance which M. Rieord has used in his long study of an intricate disease; and to M. Zambaco my deference and admiration of the manner in which he has executed his work, already honoured by the Imperial Academy of Medicine with the Civrieux Prize.

M. Zambaco's comprehensive work on syphilitic nervous affections includes very nearly the entire roll of our nosological catalogue. His cases are ranged under the different heads of morbid action into which he has divided his essay.

He first describes a form of syphilitic disease, "Névropathique Diathésique." 2nd, "Des Neuralgies Syphilitiques." 3rd, "Des Troubles de la Mobilité par Diathèse Syphilitique"—in fact, paralysis of motion. 5th, "De quelques Troubles de la Sensibilité et de la Mobilité, bornées à un seul Membre et consécutives à la Compression des Troncs Nerveux, par des Tumeurs

Syphilitiques." 6th, "Des Convulsions Syphilitiques." 7th, "D'une Forme spéciale de Paralyse Générale Syphilitique non décrite et ressemblant parfois à la Paralyse Générale des Alienés." 8th, "Des Troubles de la Sensibilité Générale." 9th, "De l'Amaurose et de l'Amblyopie." 10th, "Des Odorats occasionnés de la Syphilis." 11th, "Des Troubles du Goût." 12th, "Des Paralysies *sine Materia*." 13th, "Des Fièvres Intermittentes Syphilitiques." 14th, "De la Chorée Syphilitique." 15th, "De l'Hystérie Syphilitique." 16th, "De l'Épilepsie Syphilitique." 17th, "Des Troubles Intellectuelles que la Syphilis peut produire." 18th, "De l'Asthme Syphilitique."

I thus relate this long roll of syphilitic nervous affections in order that they may receive the attentive consideration that the high position and repute of the narrators of those cases entitle them to. Experienced and skilful observers, with abundant opportunity of seeing and contrasting diseases, are alone capable of describing the many diagnoses involved in the matter discussed in the course of this work.

On such sections as I have been conversant with I have already published, as on syphilitic paralysis, paraplegia, epilepsy, amaurosis, neuralgia, and syphilitic quotidian. In my second contribution on tertiary syphilis the ninth case, the very first which directed me to the untaught and rare effects of constitutional syphilis, it was, as in M. Zambaco's essay, a case of quotidian syphilitic intermittent. I am now, for the first time, supported in my strange and fortunate diagnosis by that section of the essay on syphilitic intermittent fever. The diagnosis was made in 1837; the



patient was on the very verge of the grave, when the decided diagnosis, with the immediate use of mercury by inunction, proved the most potent restorative, as well as the swiftest, I ever witnessed in the range of our pharmacopœia. The gentleman is now in perfect health, and holds all but the highest military title.

A careful perusal of the cases reported as treated by M. Ricord, at the Hôpital du Midi, in tertiary forms of syphilis, will not show the avoidance and repugnance to the use of mercury in that stage of the disease usually supposed, and that perfect confidence in the unassisted specific power of the iodide of potassium. It will be found that what he calls the *mixed* treatment is that in most cases relied on.

Besides an endeavour to show the mode in which syphilis affected the nervous system in the later periods of constitutional contamination, I wished equally to prove that even when the bones and their coverings were involved, yet mercury not only could be employed with safety, but even became sometimes the sole reliance for the rescue of life from impending death. The practice of this great master of his school in Paris confirms, and I think decides, a momentous question. Iodide of potassium is an acquisition of immense value in aid of long-protracted (I speak of a disease prolonged through years) cases, but it is not sufficient, and cannot free the system of the poison—it cannot supply the place of mercury.

As M. Zambaco has, in the course of his work on syphilitic nervous affections, several times referred to the cases published in this journal\* in 1852; and, as I

\* 'Dublin Quarterly Journal of Medicine,' vol. xiii.



believe, he has tried the eascs by a law of eritieism over-stringent, and not carried through in the same rigid measure as regards himself, before I make comment on his comments I feel it is but justice to translate the passages from the book, '*Anatomie Pathologique.*'

"Several physicians believe that they are authorised sometimes to suspect a syphilitic meningitis, but we know not on what this diagnosis is based, to which no autöpsy has given its sanction. It is thus Mr. Reade reports, in a special article, several cases which he designates syphilitic meningitis. The patients whom he cites were evidently under an outburst of the diathesis—were affected by divers cerebral accidents, which a specific treatment caused to disappear. There occurred epilepsy, paralysis, or paraplegia. The pathological anatomy has in no case been described by this physician. We contest the right that he assumes to give the title of syphilitic meningitis to these affections."\*—Page 52.

The second notice and comment is as follows:—From the context I think it will be perceived that the name of Dr. Todd, with which the paragraph begins, is a mistake, as the comment refers to an extract from the same '*Dublin Quarterly Journal.*' It is this:—"Paralysie du Mouvement."—Zambaco, page 184.

"Todd has cited several cases of syphilitic cerebral disease, but without an autopsy he is not even justified in using the title 'meningitis' which he confers on his cases. These cases induce an exceeding desire that their author had given us a little more of detail. The following is a short extract from one of his cases, which

\* '*Dublin Quarterly Journal of Medicine,*' February, 1852.

is related as No. 2. Another will be found in our chapter on mental alienation."

Then follows M. Zambaco's translation of Case 2, from the 'Dublin Quarterly Journal,' February, 1852 :

"Syphilitic meningitis ; mental incapacity ; incoherence of ideas ; propensity to suicide ; paralysis.—A gentleman, twenty-six years of age, was attacked with hemiplegia ; his want of intelligence did not permit him to give an account of his state. This patient had before had a deep syphilitic ulcer of the throat. Treatment by iodide of potassium restored him. But he was struck anew with paralysis and a double syphilitic iritis. A mercurial treatment made all these disorders, physical and intellectual, rapidly to disappear. According to our author, a tumour of the dura mater was the cause of this cerebral irritation."\*

In confirmation of the correctness of my assumption that Dr. Todd's name was introduced by mistake, in the next page, 186, he refers to his Clinical Lecture, 'Medical Gazette,' Jan., 1851. It refers to the post-mortem examination of Dr. Todd's cases, exhibiting ramollissement of the cerebral matter, and of course impugning the nosological designation "meningitis." He refers to Dr. Inman's cases, 'Medical Gazette,' July, 1843, and likewise impugns them, winding up with this conclusion :

"Thomas Reade has published several cases of cerebral diseases which appear to have been determined by syphilis. But we find nowhere a justification for the appellation of syphilitic meningitis which he has con-

\* The 'Dublin Quarterly Journal of Medicine,' February, 1852, vol. xiii, by Thomas Reade.

ferred upon them, since he has not made a single autopsy. They ought, consequently, to remain in the domain of facts, provoked by syphilis, without affecting to fix the precise alteration or diathetic lesion to which they appertain. However, we find a case\* in the article cited most interesting, entitled 'Syphilitic meningitis; epileptic attack; intermittent cranial neuralgia; intellectual derangement; paralysis of sphincters.'

"We propose to ourselves to transcribe this at the end of the chapter on mental alienation, because the disorders of the mental faculties are the most important in this malady above any other symptom.

"The existence of meningitis as an isolated form of affection has never been demonstrated, and the English authors who thus speak have never shown the proofs by an autopsy."

M. Zambaco takes exception to the nosological designation "syphilitic meningitis," as not founded and proved by a necroscopic examination. In an exact science, no doubt, this rule would be valid, but in pathology it can never be doubted that in many diseases, external as well as internal, resolution takes place and, after recovery, leaves no trace whatever that there had been pre-existing disease. For example, some phlegmons (not terminating in abscess), erysipelas in external parts, also gout and rheumatism. Bronchitis and pneumonia may be adduced as internal diseases which rarely leave any tangible evidence of their existence. Such, I believe, to be the phenomena of syphilitic meningitis;

\* Case No. III.—The 'Dublin Quarterly Journal of Medicine' for 1852—by Thomas Reade.

and while it still remains merely a tumefaction of the dura mater,—a diffused internal node pressing on the arachnoid, pia mater, and surface of the cerebrum, it is still perfectly curable—is a true meningitis, and only by want of specific treatment proceeds to destructive disease, involving the cerebral matter. Consequently there could, in ordinary circumstances, be no post-mortem in syphilitic meningitis, death being the attendant only on long neglect or erroneous diagnosis and treatment. The three cases published by me in 1852, I have strong reason to believe, were truly typified by the denomination of syphilitic meningitis, from the perfect restoration that all three had attained prior to the publication. But it will be found by those who refer to my second series, ‘*Dublin Quarterly Journal*,’ November, 1860, both Nos. I and III had succumbed to the fatal diathesis; and, I believe, with destructive disease of cerebral matter in both. No post-mortem was permitted in either. Case No. II informs me that he has enjoyed perfect health since he left my care. I may add, it is no irrational inference that, as we see nodes on the tibia and other bones—as the parietal, frontal, and occipital—disperse and disappear before our eyes under specific treatment, so it may be conceived, without any strain on the imagination, that the same process may be perfected within the cranium as that exhibited on the outward aspect of the body.

M. Zambaco, in his preface, admits, as he expresses it, “*de la manière la plus positive*,” that functional perversion may exist without any corresponding organic lesion; and his cases of *paralyses syphilitiques*, “*sine materiâ*,” attest the fact by their autopsy. It would be

wearisome to pursue this subject, and would involve more space than the subject absolutely demands.

But lest I should be misunderstood by a protest against any portion of the author's criticism, it is by no means inconsistent with my appreciation of a most comprehensive and valuable work, which will, I hope, early appear in an English translation.

The following may be offered as the inference and conclusion from the substance and import of this retrospect :

1st. That the opinions of John Hunter constitute an epoch in the history of syphilis, guiding a great majority of practitioners in surgery for many years.

2nd. That these doctrines ignored the complication of the brain and nervous system.

3rd. That the treatment of syphilitic primary ulcers without mercury, and Carmichael's promulgation of plurality of poisons, formed a second epoch.

4th. That the introduction of hydriodate of potass as a specific and substitute for mercury, in every stage of syphilis, quickly followed on the new doctrine.

5th. That the next remarkable event was M. Ricord's experiments by syphilitic inoculation.

6th. That although practitioners, both in England and France, were cognizant of the complication of the cerebral and nervous system in tertiary syphilis, yet no decisive impression on the minds of the profession generally was shown until after the publications on the subject in 1851 and 1852.

7th. That M. Ricord, like Carmichael and the non-mercurialists, seem to have been so intent on their investigations into the primary and secondary forms of



the disease, as to have nearly or entirely overlooked the important and formidable complications of the later periods.

10th. That M. Ricord, by publication in 1848, referred to certain forms of paralysis, epilepsy, and paraplegia, connected with tertiary syphilis.

11th. That the division of the practice of medicine into surgery and medicine mainly retarded the progress and advancement of true knowledge of the nervous diseases elicited by constitutional syphilis. Nervous maladies occurring in those suffering manifestly from syphilis were regarded as intercurrent or separate diseases, and transferred to the physician for treatment.

12th. That the proper and true education of the surgeon being now understood to include the entire curriculum of the physician, a measure of competence is attained to investigate the phenomena, not in parts, but as a whole, and surgeons are thus fitted to apply all the sources of science to enhance the sagacity acquired by dealing with understood and tangible disease.

13th. That the experience collected by so many observers, and now widely published, has transferred the complication of the brain and nervous system in tertiary syphilis from the mysteries to the facts of medical science.

## IV.

## UNPUBLISHED CASES.

CASE X.—In the year 1865 I was asked by his usual medical adviser to visit with him a gentleman who had long suffered from weakness of his limbs and deficient power of walking.

He informed me that the patient had recently returned from Germany, where he, by the advice of an eminent physician in that country, had been using the waters of some of the springs in repute there. Under the direction of this physician he considered he had derived benefit. At an interview, prior to his departure, he was advised to bring with him to Ireland a supply of the water for internal use—with which direction he complied, and carried out the treatment indicated. However, he soon discovered that he was progressively losing strength, and the power of his limbs becoming more defective.

On the morning of our first visit the physician told me that he apprehended that there might be a syphilitic origin connected with the depraved state of his health and the corresponding infirmity of motion. In reference to this presumption he desired that I should assist him by a strict and careful investigation into all the circumstances leading to such a conclusion.

The patient then, prior to my examination of his person, related to me succinctly the history of a primary

venereal sore, followed by distinct secondary symptoms, and these again followed for a period of not less than three years prior to the time of my visit by much disordered health, of which the most prominent signs were those of loss of power in his lower limbs, paralysis of the bladder, requiring the use daily of the catheter, and some difficulty of expulsion of his feces. For these serious sufferings he had at different times taken the advice of surgeons and physicians of the first eminence in Dublin and London. Such was the compendious narration I heard of the case, which was sufficient to enable me to follow up the clue. What he most emphatically complained of was the involuntary discharge of his urine, by which his bed was nightly wetted.

Proceeding to our personal examination we detected no symptoms nor sequelæ of symptoms of constitutional syphilis on the scalp, in the hair, the throat, or the upper part of the trunk; but over the lowest lumbar vertebra and the upper portion of the sacrum we found a distinct, defined tumour of the periosteum, elevated, but not of much prominence, in diameter of about two and a half inches, perfectly pale and free from pain. On the centre of the right tibia there was a small node, best shown in profile. The emaciation was excessive, but he states that altogether he daily consumes sufficient food for his support. He is a man of rather epicurean than simple tastes in his meals, which he habitually gratifies. His nights are wakeful, having only broken and interrupted slumbers. I observed a very capacious chamber utensil containing a large quantity of light straw-coloured fluid, resembling urine diluted with water. I questioned him, could that be the urine of the night? He

replied it was, and that it was the usual nightly quantity. He was still taking the German mineral water according to directions.

I quite concurred with his physician that all his symptoms and sufferings, constitutional and local, were to be assigned to one cause—to syphilitic cachexy and the development of the poison in the periosteum of the lowest lumbar vertebra and superior portion of the sacrum, and the symptoms necessarily imply the engagement of the corresponding membrane of the spinal marrow above the cauda equina.

The profuse diuresis, if not promoted by the effect of the mineral water, we are to seek a cause for by a fitting examination of the urine.

Our first consultation resulted in a prohibition of the mineral water. In the present feeble and exhausted state we considered it advisable to postpone any resort to a specific form of prescription and rely on general tonics—five grains of citrate of iron and quina in some vegetable infusion, three times a day. When I next met his physician he informed me that the examination of the urine negatived any form of disease of the kidneys or of their functions. After the lapse of a fortnight we renewed our inquiries and found him rather stronger, but complained much of excessive distension of the stomach from flatus soon after dinner ; rest at night not better ; still distressed by involuntary escape of his urine in bed ; nocturnal evacuation of urine diminished in quantity. On passing my hand over the lower abdomen I felt a prominence in the region of the bladder above the pubis, which led us to pass a catheter ; nearly a quart of urine was drawn off and gave him an empty

bladder. He had learned on the previous attack of paralysis of the bladder to introduce a flexible catheter himself. We recommended him to use the instrument three times a day—on rising in the morning, before dinner, and at bed-time.

At the expiration of another fortnight we again saw him. We found him materially improved in strength, and somewhat in appearance; his digestion going on better, and quite relieved of the flatulent distension. Bladder still relieved by the catheter. We now directed for him five grains of the hydriodate of potass every eighth hour; ten drops of hydrochlorate of iron in water every night; a mild aperient pill occasionally; a liberal diet, though careful as to selection; good claret with his dinner, no other wine.

On the eighth day of the use of the hydriodate of potass he became very smartly iodised. But even at this early period he had received very marked amendment from the iodine. He describes himself as enjoying manifest benefit in his general health and renewed elasticity of feeling. Ordered, immediately on subsidence of the distress of frontal cavities and nasal passages, to resume the doses of hydriodate of potass; continue tincture of hydrochlorate of iron at night. As the bladder was not recovering the power of expelling its contents, we directed the daily application of the electro-magnetic current over that region of bladder. The tumour of the spine over the last lumbar vertebra and superior part of the sacrum to be painted every night with the following tincture:

Tincturæ Iodini, ʒj;  
Iodini, gr. vj. M.



He persevered in this course of treatment for a month; at the termination of this time we found him greatly improved in flesh, strength, and activity; has recovered much power over his bladder, and frequently omits the use of the catheter.

From this time forth there is nothing to detail but the progressive amendment in the use of his limbs; he became as stout and heavy as at any previous period of his life, and assured me that for years he had not enjoyed such perfect freedom of his limbs, and, indeed, knew no difference from any period of his former best health. This all corresponds with the latest disappearance of the tumour of the spine and sacrum. No change of consequence beyond that of the vehicle in which the dose of hydriodate of potass was dissolved. Decoction of sarsaparilla; infusion of quassia, cascarilla, or bark; tincture of iron at night, and tincture of iodine to the tumour. Generous dietary—all this continued for about four months, till I ceased to be consulted.

CASE XI.—In the year 1852 I was required to visit, at a considerable distance from Belfast, a very robust and apparently healthy gentleman, aged 26, who, on the previous day, while engaged in some outdoor amusement on the lawn of a country residence, with other young persons, fell down in an epileptic fit. The convulsive movements lasted more than twenty minutes by report of the spectators.

The medical gentleman who saw him as soon as the distance would permit met me in consultation. He told me that he had applied some leeches to his temples, as he was a plethoric man, and complained of a sense of fulness

and distension in his head. His pulse was soft and even, and in number quite within the bounds of health. He agreed to use moderate purging, light restrictive dietary, and wait in expectation of a clear and expressive symptom to give us a diagnosis on which we might adopt suitable treatment. No fit, however, again occurred, but he was oppressed with a sensation in his head, which caused him frequently to feel as if he were about to fall. He came to reside at a short distance from Belfast. I then frequently saw him. He became impressed with the belief that, from the sensation of his head, he would receive immediate relief from a general bleeding. As he was very robust, possessing excellent blood-making power in his system, I bled him from the arm to 12 or 14 oz. This was not followed by any distinct relief, and was not repeated. As sensations pretty much assimilated to the "petit mal" or epileptiform disorder, I put him on sulphate of zinc with valerian in infusion and tincture. This treatment had a fair trial, but without any advantage. I then changed to pills of the valerianate of zinc, with like failure of benefit. I now had a consultation with Mr. Cusack, in Dublin, to whom I related the previous history of his life, which suggested to me the possibility of there being syphilitic disturbance of the cerebrum. I related to him what he told me himself, that, when quite a boy, he had been treated by a surgeon for venereal ulcers—that he had contracted similar ulcers frequently—that he had become so expert by the knowledge he had derived from his surgeons that he cauterised them himself on several occasions, with the disappearance of the ulcer. All this previous period to that of which I speak from my own personal know-

ledge he lived a life of reckless profligacy, with a profuse waste of money, to the gratification of all his animal propensities. Such was the slight sketch I gave Mr. Cusack of the subject of consultation, adding further my own direct knowledge of him. About eighteen months prior to his epileptic seizure he had come to me to ask my advice for an eruption which largely covered the trunk, with ulceration of the throat, both of indisputable venereal character. I commenced to treat him with mercury, which acted most kindly, and his symptoms of the throat and skin yielded with a regular and steady progress. When the visible signs of the constitutional affection had disappeared, but prior to my dismissing him from my care, he pleaded indispensable business to leave for eight days. It was, indeed, much opposed to my judgment to allow the journey. He, on arriving in a capital city, at once resumed all his habitual courses of profligate debauchery and extravagance. He abandoned all control, and ceased to be my patient until I again was summoned to visit him after his epileptic seizure.

Mr. Cusack required him to be stripped, and together we made as careful an investigation as his experience of disease could suggest. Mr. Cusack said, and I acknowledged, that, as regarding visible or tangible symptoms to sustain an opinion that the cerebral distress was based on syphilitic constitutional contamination, there was no proof; and he considered that the redundant nourishment of his physical frame rather denoted a treatment to reduce the supply of nutritious matter, and to put him on a very spare regimen, merely adequate to subsistence. This plan was duly and fully

carried out, and followed with rigid observance by the patient. After a trial of three months according to this theory of his cerebral affection, I found no subsidence or mitigation of his state. It was now decided that he should go to London and have a consultation of Sir B. C. Brodie and Dr. Marshall Hall, for whose information I gave a full statement of his case, with my own doubts and conjectures. They saw him several times; stripped and put him through a careful investigation. Their scrutiny elicited the following plain and unequivocal decision in a letter to me from Dr. Marshall Hall:

“Sir B. C. Brodie and I have met in the case of Mr. —. Sir B. C. Brodie thinks there is no remaining syphilitic taint, and, at any rate, lays down the rule of practice to wait for some indication of it before resorting to any mercurial. There is obviously a disposition to seizures, most likely of the epileptic kind, and for this I have prescribed—No. 1. A mild mercurial alterative. 2. An antacid aperient daily. 3. A simple diet, free from stimulants. 4. A very high posture in bed. 5. Much gentle exercise in the open air.”

This treatment being in no respect different from Mr. Cusaek's, except that Dr. M. Hall rather improved the regimen; and all the consultants concurred that syphilitic taint was unsustained. With the slight modification, this instruction was duly carried for two months. I then, “*meo periculo*,” commenced the use of the hydriodate of potass, in five grains, three times a day, in a bitter infusion, which change was quickly followed by improvement of his sensation and relief from the apprehension of falling, and in three months he no longer needed medical

guidance, and returned to all his former habits. No symptoms of an outward and accepted evidence of a syphilitic character ever appeared at any time during this treatment or subsequently.

CASE XII.—In year 1863 I was required in consultation to see an officer in the Queen's service, who had been quartered in one of the colonies about four years before the time of my visit. He had contracted a venereal ulcer there, which had been treated with mercury. In the course of some time secondary symptoms followed, when mercury was again resorted to. Not long subsequently he became the subject of epileptic seizures, at rather distant intervals of time. His case had been submitted to several eminent medical men, but he had derived no permanent relief from his malady.

The gentleman in attendance informed me that one of the physicians in London had prescribed hydriodate of potass. Under its use the fits appeared to be in some degree checked, being marked by a longer interval between the seizures. This occurrence had suggested to the physician in attendance the propriety of a consultation, to endeavour to determine if an existing syphilitic taint might not be the cause, and be at the root of the cerebral disturbance, taking into consideration that the epileptic seizure had been subsequent to the evolution of constitutional syphilis.

The patient I found possessed of a very fully developed muscular frame, and had no visible semblance of ill-health. His hair was good and very thickly set; well-formed head and features; altogether a well-pro-



portioned and comely man of 25 or 26 years of age. I observed a disfiguring mark, with a prominence over the nasal bones. Calling his attention to it, he told me that about six weeks before, a scaffolding, on which he was standing, gave way, when he received some bruises and that blow on his nose. On examination it seemed to me that there was a thickening of the periosteum of the nasal bones. Proceeding in my inquiry, I detected a small node in front of the middle of the right tibia. The affection of the periosteal coverings seemed to justify a diagnosis that he suffered from a constitutional syphilitic disease, and that would afford a reasonable hope that, under the treatment adopted to subdue the constitutional taint, the epileptic seizures might be removed, and the external evidences might be significant of syphilitic deposits on the "dura mater," a connection I had more than once seen and known happen.

This interpretation of the case met the approval of his physician, and we recommended that his treatment should immediately commence with five-grain doses of hydriodate of potass in some bitter vegetable infusion; in a week to increase the dose to ten grains; and the case was again to be offered to my investigation in one month. I met the physician in attendance some days after, and he informed me that a decided syphilitic eruption had appeared very extensively over the body, and that he had been visited by a medical gentleman from London (a relative), and that he advises resorting to the employment of mercury. Upon this I gave no opinion, for or against, without seeing the patient. The patient soon removed to London. I only submit the case on the grounds of the value that may be attached

to a true diagnosis, as it bears on practice, and the safety, if possible, of the patient's life.

## V.

## OBSERVATIONS.

My remarks will include the three unpublished cases, Nos. X, XI, XII. No. X being a case in which the vital powers were reduced to an abject and advancing state of prostration, under effects of a profound syphilitic cachexy, added to a very lengthened disorder of the spinal marrow, exhibited by gradations of paraplegia from imperfection of motion of the lower limbs, only slight in degree, up to very defective motive power, with great muscular poverty of substance. For four years there appears *never* to have been, under any treatment, a full restoration of the natural control and power of the lower limbs. The conclusion of the case shows with what potency and restorative efficacy hydriodate of potass, when the system was cautiously prepared for its administration, promptly showed its specific and salutary action in this special instance. The dose seems to be unusually small, exerting its influence at the same time that it produced its significant evidence in the nasal passages; it also demonstrated its control over disease by sensible relief.

In this period of the disease we did not use a single grain of any mercurial preparation; but the hydro-

ehlorate of iron played, I believe, an essential part in the process of blood-restoration.

The two subsequent cases, XI and XII, are in striking contrast to the former. Both being in outward form and appearance possessed of health and vigour above the ordinary standard of a sound and unimpaired constitution, yet in both the malign influence of the syphilitic diathesis was at destructive work—in both without a significant manifestation to guide and direct to the source and cause of that fearful malady, epilepsy, which had affected both. The *absence* of such outward manifestation for a length of time caused the best class of experienced physicians to reject the assumption of a possible syphilitic taint, so their malady retained its seat. In No. XI, after repeated consultations and trials of the prescriptions and directions of high authority, the disease at last yielded to a steady course of hydriodate of potass. In the case XII the detection of a small node on the tibia afforded a confident diagnosis, and the rapid outbreak of syphilitic eruptions under the influence of hydriodate of potass forced an irresistible conviction.

These latter cases show how limited may be the constitutional action, how obscure, so closely imitating disease occurring under a great variety of states and morbid sympathies in the human frame. These cases, under an aspect of health, absence of all cachectic signs and solitary evidences of disease, should cause a high degree of care and deliberation in pronouncing a diagnosis that determines a treatment.

In connection with those cases, I beg to subjoin a case which Dr. Cumming, Professor of the Practice of

Medicine, Queen's College, invited me to see when in hospital in Belfast. At the time I saw him the only diagnostic symptom, or that resembled syphilitic when I saw him, was the persistent pain of the head. The case was fatal under the circumstances related, though, unfortunately, there was no post-mortem. I consider there can be little doubt the cause was destructive syphilitic disease of the cerebrum.

## VI.

### CASE FROM BELFAST HOSPITAL.

"MONDAY, December 17th, 1866.—John Flynn, a robust, healthy looking man, ætat. 28, a policeman, was lately admitted to the General Hospital, suffering from a severe pain in the head.

"The patient states that in 1861 he contracted venereal disease. The primary sore was, in his own words, just a red pimple on the glans.

"In 1863 an eruption appeared on the skin, which he describes as being a number of red spots, most numerous on the head and back, and painless.

"Coincidentally with the eruption he had a pain in the head, from which he has suffered, with intermissions, ever since. About twelve months ago he had a sore throat.

"He complains at present of a pain in the head, from which he has suffered constantly for three months.

"The pain is worse at night, and is described by the patient as running all through his head, but most in-

tense at the temples. It has increased during the past week.

“Ordered by Dr. Cumming—

“Potass. Iod., ʒij;

Decoct. Sarsæ, ʒij.

A table-spoonful to be taken three times a day.

“January 2nd, 1867.—Flynn denies having contracted venereal disease a second time. Fumigation ordered.

“13th.—Gums slightly tender to-day for the first time.

“14th.—Pain greatly relieved.

“The patient was soon after discharged, and on the 12th of February died suddenly.

“According to the newspaper report, he was dressing himself for duty in the morning, when he was seized with convulsions and died almost instantaneously.

“WILLIAM S. CORE.”

## VII.

### DR. HUGHLINGS JACKSON'S CLINICAL CASE, LONDON HOSPITAL.

IN the ‘Lancet,’ October 27th, 1866, I find a clinical lecture by Dr. Hughlings Jackson, in the London Hospital, on a case of disease of the cerebral arteries (syphilitic)—softening of the brain. His comments are of much weight and importance connected with the cases I have related of syphilitic epilepsy.

“He says, ‘The disease of the cerebral arteries in the



following case was not of the kind usually found with softening of the brain.' Dr. Hughlings Jackson has but twice before seen this condition of the arteries of the brain, and both cases were syphilitic. He also refers to Dr. Wilks and Dr. Bristowe having narrated similar pathological evidence. Dr. Hughlings Jackson said, whilst admitting that nerve-tissue might directly suffer from syphilis, he himself knew nothing of syphilitic affections of the nervous system otherwise than as arising from the disease of the blood-vessels and the pia mater; in short, syphilitic diseases of the nervous system were rather diseases of the connecting tissue in or around the nervous organs. He added, however, he feared that we frequently saw syphilitic diseases of the nervous system, and especially epileptiform seizure, too late for very successful treatment. When a man has a unilateral convulsion—and syphilitic convulsions are usually unilateral—in *the midst of ordinary health*, it is a sign, Dr. Hughlings Jackson thinks, that there has been disease in the head for some time before it began, as it were, 'to live an outward life' in occasional convulsive attacks."

However, the main point of the reference lies in the post-mortem examination of the patient, with a history of syphilitic diseases, who was admitted into the London Hospital on Tuesday, with hemiplegia of the left side, died on the following Friday rather unexpectedly. The examination showed disease in the brain alone.

"The carotid arteries at each side were from the points at which they were cut to the giving off of the anterior and middle cerebral arteries much thickened, and the thickening extended about a quarter of an inch up each vessel in a sort of node, ending abruptly. The

right cerebral artery was much narrowed at one part, and was blocked up, but the coagulum seemed recent. Soon after, the commencement of the left cerebral artery was swollen into a node the size of a large pea." The remainder of the report contains similar pathology of the cerebral arteries, with softening of the brain in both hemispheres.

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I have been induced to submit to the medical profession this group of twelve cases of syphilitic diseases of the nervous system, particularly as they contain a wide range of examples and evidences of the true and comprehensive nature of the class of disease emanating from the single source, the constitutional poison of syphilis. A single instance of the disease may be so complex as to leave few portions of the nervous system intact and uninjured, or betrayed by the large extent of functional disorder, as shown in Case I (first series). Again, a single unsupported symptom, as Cases IX, XI, XII, may confound the judgment, and mislead a number of competent and experienced medical men for months, even years, ere the true diagnosis of the disease has been revealed, and the sufferer at last, and sometimes over-late, submitted to appropriate specific treatment to encounter and circumvent the morbid process. I also may specially ask the attention of readers to that case, No. IX (second series), as being, I have reason to believe, unique in our medical literature—a true quotidian fever, perfect in all the characters of ague, perfect periodicity, regular three stages—"rigor, calor, sudor." Yet this ultimately resolved itself into an undoubted case of constitutional syphilis, and with a surprising

rapidity, when apparently "in extremis," the life about to give way under the unflinching tenacity of the disease—to the inunction of mercury, which on the fourth day relieved the patient of the quotidian ague, which, "mirabile dictu," never reappeared, though many of the accidents of constitutional syphilis had to be dealt with and overcome, though severe in character, but with unmistakable proofs of the disease—all yielded in less than eighteen months, and left a sound frame, now in good health and vigour, for very advanced years.

My first series of syphilitic diseases of the nervous system (syphilitic meningitis) did not contain the narration of this case, because it was so remarkable an anomaly that I feared to make too large a demand on professional credence at once. The cases were sufficiently outside the general current of opinion that I deemed it prudent then to withhold the publication until the seeds sown should bear a crop of adequate strength to sustain its individuality. After the lapse of some years I found the subject had then been considered and examined on its first basis, as a step of progress in our knowledge of disease and a valuable instruction in practice. But I have not left myself unprotected or undefended by authority, as related from M. Zambaco.\* (See Appendix.)

In the concluding paragraph of the first series (syphilitic meningitis) I have referred to the action of mercury on the human constitution. I now again refer to the same subject, because it is so intimately associated with our future guidance, to obtain a sure standard for its employment or its avoidance in those complicated and

\* 'Des Fièvres Intermittentes Syphilitiques,' p. 432.

serious disorders. For the last thirty or forty years medical writers of repute, and considerable influence on the judgment and practices of surgeons and physicians, have very strongly condemned the use of mercury, not only as regards syphilis, but also as regards its supposed and approved value over acute inflammations, such as pleuritis, pericarditis, pneumonia, iritis, and, in fact, the wide extent of acute inflammations, wherever located, in the whole frame. Of those who have taken a very prominent part in the reprobation of mercury I find Mr. Carmichael, who, I may say, in Ireland commenced the crusade, followed by Dr. Robert Graves and, more recently, Dr. E. B. Todd, of London, in his clinical lectures on the practice of medicine. Now, I confess, perhaps my literary research has been limited, but I am not cognisant of any record of facts, substantiated by cases, to sustain the sweeping assertion, so often repeated, that mercury induces a frightful group of destruction of the bony system and its coverings, having never, in the course of a tolerable opportunity and experience in the observation and study of disease, seen such cases to establish those alarming consequences; and I can also refer to men of the calmest judgment, whose place in their profession ranks certainly not below the impugners of the use of mercury. I find Sir B. C. Brodie, Sir Thomas Watson, Sir Astley Cooper, and Doctor Latham, give no such solemn warning against the use of mercury in contending against disease. I am ready to admit that those who employ and rely on it in the profound emergencies of existence need to be well instructed in its use—are bound to give, while so employing it, constant vigilance

and scrutiny to its action. My own experience of seeing the practice of the late Mr. Colles, of Dublin, was very considerable in select cases of extreme disease in private practice. I saw him contend with mercury—and mercury alone—in the most formidable effects of constitutional taint in persons in whom he could not induce salivation—throat, nasal passages, particularly, and which appeared to me the most hopeless cases—yet all these recovered without a mutilation, and survived to long life without the injury of a single bone; married, and had large families, all healthy.

I felt always that a peculiar susceptibility to even minute doses of mercury was the chief obstacle to the use of mercury in practice, yet even this has only retarded recoveries, never elicited permanent injury. I conclude with this declaration—that in my own practice I never saw any instance in which I had to deplore its use, while on the other (the credit) side of the account I have deep reason to count it as a truly heroic remedy, without the aid of which the success of the physician would be greatly impaired; but, like all weapons of great force, it needs the hand of the expert alone to employ it.

I beg to fix the attention of those who peruse these cases, in reference to the value of the remedies used, to mark that in Case X hydriodate of potass and tincture of iron were the only medicines.



## PATHOLOGY OF THE SPINAL MARROW.

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1. CASE OF SYMMETRICAL MUSCULAR ATROPHY.
2. CASE OF PARALYSIS OF THE BODY BENEATH THE PHRENIC NERVES, FROM CONCUSSION.
3. PARALYSIS OF THE BODY BENEATH THE PHRENIC NERVES DURING DENTITION.

THE narration of rare or anomalous cases is seldom commendable, their utility or instruction being often not sufficiently apparent. The best reason for publication is to be found in the exposition of improved methods of treatment of known diseases, of frequent occurrence, by which the risk of life is lessened under surgical operation or by prescriptions, or the means of investigation of disease, as to its nature, are rendered more exact and certain. As a signal instance of the former, I may mention the systematic and regulated pressure of the femoral artery for the cure of popliteal aneurism; the ligature of internal hæmorrhoids; the use of preparations of iodine in tertiary syphilis. Of the latter I would name the exploration of the heart and lungs by auscultation and percussion; the chemical examination of the urine in many disorders of the system; whereby the practice of medicine is made to touch the boundary of exact science, and so reduce the number of the

“opprobria” of speculation and uncertainty imputed to the principles of diagnosis.

Rare cases, though of minor value, may, notwithstanding, have strong claims on study and attention from their inherent philosophical interest. The morbid or perverted actions of parts under disease may elucidate and explain the vital, though hidden, actions of parts or organs in health; thereby substituting fact for theory, and certainty for mysticism.

I am under the confident belief that one of these cases, at least, will furnish a subject of much interest to the physiologist, namely, that of muscular atrophy. It is, I presume, a subject new to British medical literature, and only recently taken up in France, more particularly by Cruveilhier, whose cases and reflections I propose to refer to in the course of these pages.

The following cases I am induced to relate, because I conceive they bear a high degree of significance as illustrating the compound functions of the spinal marrow, and are consequently of interest to the physiologist, who is the interrogator of Nature, and to the pathologist, who by means of the organic changes attempts to interpret the causes of signs or symptoms of disease.

As the nervous system governs and directs every function of the animal frame, harmonises all in health, so in disease its special derangement, from the extent of its sympathies, become the most complicated and abstruse group of maladies which the physician has to encounter; and amongst them are found those diseases for which the insufficiency of the medical art is most popularly stigmatised—hydrophobia, tetanus, and epilepsy.

The same property of mind which fits and guides the naturalist in his researches is mainly the prominent endowment of the skillful physician ; it is the faculty of acute observation, the ready mind to discover differences as well as similitudes, to apportion and apply to each its fitting value and preponderance, and, finally, to transmit the acquirements of genius, converted into the common implements or working-tools of ordinary intelligence. Such have been our inheritance from Harvey, Hunter, and Jenner, and, germane to our present topic, Sir Charles Bell, whose scientific zeal and industry made those discoveries in the nervous system which have opened the way and cleared the road for others to advance in ; his only recompense was the consciousness of his own genius, the conviction of the truth of his discoveries, and the certainty of a posthumous, but undying fame.

The following cases are demonstrative of the diversity of morbid actions which have their seat in the spinal marrow ; also exhibiting that, where we had reason to believe the rudimental nerve-structure had sustained organic lesion or injury, a restorative and regenerative action might be set up.

CASE I.—Mr. C. C—, æt. 19, called to consult me, in 1848, concerning a singular malady which had been in progress for eighteen months, and to arrest which all treatment had been unavailing. As he stood before me, clothed, he was a florid, robust young man, nearly six feet high, dark hair, face full and comely, eyes bright, and, in fact, outwardly a specimen of robust health and excellent constitution. When he stripped his body to

the waist he exhibited neck, chest, and arms, to the elbow-joints, reduced to a most abject degree of emaciation, such as is seen pervading the whole frame of those who have undergone protracted wasting disease. The emaciation—the decadence of muscular fibre together with the tegumentary covering—was perfectly symmetrical, muscle for muscle, on each side of the median line, both on the anterior and posterior aspect of the trunk; the greater and lesser pectoral muscles were little more dense than the strongest brown wrapping-paper; the muscles of the neck, anterior and posterior, proportionately attenuated; the muscles of the scapulæ, particularly the supra- and infra-spinal muscles, were so much diminished as to show the spine of the bone with distinctness only less than the dry bone; all prominences from the deltoids were gone, and the muscles of the humeri were reduced to the cellular membrane, the mere elementary outline of the muscles, the biceps and triceps especially; from the elbows the muscles of the forearms and hands displayed the full development of a robust and vigorous man of his stature, with all the concomitant power, sensibility, and aptitude for use. All the muscles outside the pelvis, and those of the inferior extremities, were full, strong, and well-formed.

His history was this:—Within the period of eighteen months he was in all respects, as regards the muscles of his neck, trunk, and arms, in due proportion with the forearms and lower limbs as we now see them, and was distinguished among his companions in all athletic exercises. The first sign of his approaching malady which he perceived was a degree of stiffness or difficulty

of executing the motion of putting on or removing his hat from his head. He never suffered pain, and has enjoyed uninterrupted health, his digestive functions being performed with perfect regularity.

The diagnosis was muscular atrophy of special muscles, from abeyance or destitution of the function of nutrition; in what part of the nervous system the organ that presides over muscular nutrition is located I could not tell; I believe it to be as yet unascertained. The case demonstrated that the bilateral source was equally affected. The muscles affected guided me for the motive source to the spinal marrow within the cervical vertebræ. The laws of the nervous system taught me the association of the nerves of motion with those of sensation, from proximate parts of the spinal marrow. The supplies of nutrition are most likely to be derived from the same vicinity; consequently I commenced my treatment by counter-irritation over the cervical vertebræ. I put a seton into the back of the neck; used mercury in small but long-continued doses; kept him under its sensible action for three months; subsequently I made him use dumb-bells to excite nutrition, by the stimulus of gymnastic exercises, so well known to increase muscular growth. He certainly recovered flesh and substance on the scapulæ, especially the spinati muscles. I subsequently employed electro-magnetism for several weeks; from this he considered he derived great benefit for a time, but afterwards he thought his strength diminished. I pressed it no further, and he discontinued his visits to me in 1850, about two years from the commencement of treatment.

While under my care I showed the case to several



medical men; amongst others, to two of the distinguished professors of the Queen's College, Belfast, then recently appointed; all concurred in regarding it as a physiological problem which they were unable to explain.

To complete the case, I requested Mr. C— to allow me to see him, in order that I might ascertain the course and progress of his disease. He kindly complied, and came to Belfast to-day, September 27, 1856, about six years since I had last stripped him. The change in his appearance is most decided, and altogether on the side of improvement. The first marked amendment which strikes the eye is the fair amount of adipose substance which has been restored over the whole of the emaciated surface of the chest, back, neck, and arms; he might be said to be in good condition. Formerly the ribs were all prominent, and the conical form of the chest was as apparent as in the skeleton, from the disappearance of the pectoral muscles and the excessive thinness of the tegumentary covering; over the back of the humerus the teguments fell in a loose fold. The muscles of the neck have all been fully restored; the muscles of the scapula considerably augmented; the deltoids in a small degree, but the fibre feels tense and very firm; the triceps and biceps are little better than membrane, but possess true muscular action, perfectly obedient to the will.\* The muscles of the forearms have lost much of the bulk they had six years ago; the hand became attenuated; this may be accounted for by his occupa-

\* A photograph of the appearance was taken on the 27th September, 1856. I regret I have no drawing or cast of the disease taken in 1848, when the characteristic signs were at their height.

tion, viz. a sedentary and mental pursuit for six years. He reports himself as possessing at present, and during the whole progress of this extraordinary disease, the most uninterrupted good health, his digestive functions being performed with invariable regularity; and never from its commencement up to the present time had he the least pain pending the degeneration of the muscles.

A case bearing the nearest affinity that my researches have supplied, to this one, will be found in Rokitsky's 'Pathological Anatomy.'\*

"A labourer, aged 45, who had been much exposed to wet, and was in the habit of allowing his clothes to dry upon him, was attacked, four months before he was seen, with pain in the left shoulder, which continued almost uninterruptedly for six weeks. It was most severe about fourteen days after it commenced, and still became sometimes so violent, that it seemed, he said, as if his arm would drop off. There was neither swelling nor redness, nor was there any numbness or tension when the shoulder was pressed; but he felt great pain when he raised his arm with the other hand. Without that assistance he could not lift it at all. About a week after the affection had begun, he noticed that the shoulder was wasting. As the pain subsided, the wasting gradually advanced; and at the time when he was examined, the deltoid, supra-spinatus, infra-spinatus, and the two teres muscles, appeared to be completely absorbed, or reduced to thin layers of membrane. The shoulder was free from pain, and the joint healthy, but yet he was unable to lift the arm. There was no emaciation of the forearm or hand."

\* Sydenham Society Edition, 1850, vol. iii, p. 303.

M. Cruveilhier, the eminent physician and distinguished pathologist of Paris, in an address to the Institute of France, has described, so lately as December 3, 1855, a distinct and definite form of paralysis, with muscular atrophy, for which he claims the priority or originality of discovery. I conceive it best to quote his own words from the 'Archives Générales de Médecine,' Janvier, 1856:—

“Le travail que je soumetts à l'Académie des Sciences est fondé sur un grand nombre de faits cliniques, faits qui étaient demeurés lettre close jusqu'à ce que l'anatomie pathologique les eût éclairés de sa vive lumière.

“Le hasard a voulu que j'aie été le premier à qui il ait été donné de faire l'anatomie pathologique de cette maladie; c'est là tout le secret de la part que j'ai prise à sa détermination, dont, je ne craignais pas de le dire hautement, parce que c'est la vérité, la priorité ne saurait m'être contestée.”

He terminates his memoir with the following definite conclusions:—

“1°. Qu'il existe une espèce de paralysie musculaire tantôt partielle, tantôt générale, qui envahit successivement et graduellement, faisceau par faisceau, fibre par fibre, les muscles soumis à la volonté, en laissant intactes la sensibilité générale et spéciale, les facultés intellectuelles et affectives, et toutes les fonctions de la vie nutritive, autres que la nutrition musculaire.

“2°. Que cette paralysie musculaire graduelle est la conséquence de l'atrophie progressive des racines antérieures des nerfs rachidiens et de l'atrophie également progressive des muscles correspondants, avec

intégrité parfaite des racines postérieures des mêmes nerfs, intégrité parfaite des cordons antérieurs et postérieurs de la moëlle et intégrité parfaite de l'encéphale.

“3°. Que cette paralysie musculaire atrophique doit être rapprochée non de la paralysie qui a son point de départ aux centres nerveux, mais de celle qui résulte de la section des nerfs affectés aux muscles : ainsi la section du nerf radial, du nerf cubital, ou du nerf médian, détermine dans les muscles de l'avant-bras et de la main, auxquels chacun de ces muscles fournit, une paralysie musculaire atrophique identique à celle qui résulte de l'atrophie des racines spinales antérieures, portée à son plus haut degré de développement.

“4°. Que les faits relatifs à la paralysie musculaire atrophique sont pleinement confirmatifs du grand théorème de Charles Bell, en ce qui touche la distinction des racines des nerfs spinaux en racines antérieures ou *motrices*, et en racines postérieures ou *sensitives*. J'ajoute que ces faits pathologiques peuvent en être considérés comme la démonstration la plus complète et la plus *péremptoire*.

“5°. *Que ces observations établissent une influence non-soupçonnée des racines antérieures des nerfs spinaux sur la nutrition musculaire.*”

By the light received from the study of M. Cruveilhier's valuable memoir, I conceive this case has established a fact relative to the physiology of the spinal marrow, derived from the observation of its pathological phenomena. Like the division and separation of a ray of light into its elements in the spectrum, so by the phenomena of its pathology are we enabled to exhibit and display the constituent functions of the spinal

marrow. It is here clearly established that muscular atrophy may exist without paralysis, as paralysis of motion may exist without default of sensation or the converse; atrophy of muscle must ensue on paralysis, as atrophy is inevitable on *disuse*. In Mr. C. C.'s case use never ceased: he could always dress himself, use dumb-bells; his present exercise is pulling an oar in a boat on the sea. It is here established that the symmetrical atrophy may undergo arrest, may even renew the vital action of nutrition to the renovation of the decayed muscle.

Within a few days I have had an opportunity of examining a case such as those described by M. Cruveilhier, of muscular paralysis with atrophy, through the courtesy of Dr. Seaton Reid, Physician to the Fever Hospital of the Belfast Union Workhouse. It is a perfect example of the disease as described, commencing at the shoulder, and spreading down the arms and hands, and subsequently to the feet. The distinctions which I have pointed out in this case are most manifest and prominent; from the shoulder, the arms hang by the side utterly powerless. At the Union Workhouse they have had a post-mortem examination of another case confirming the pathology of the disease, having found the same morbid changes in the roots of the anterior nerves of the spine, as Cruveilhier has described.\*

CASE II.—*Paralysis of the Body beneath the Phrenic Nerve*.—Mr. J. P.—, on the evening of the 31st of October, 1835, when descending a hill, was thrown from a taxicart; as he supposes, the back of his neck and upper

\* See Appendix, note on Muscular Atrophy.



and adjoining portion of the dorsal spine struck the ground. He was lifted up insensible, and perfectly powerless. On my visit the following morning, he was enabled to relate to me the occurrence of the accident; after which he had no recollection of anything until he recovered his speech in his own bed; he was perfectly powerless of his body as relates to motion, from his neck downwards, as completely as if his body had been chiselled out of granite; no power to expel urine; breathing performed by the diaphragm. He had passed the night sleepless, and in extreme suffering; he referred the pain to the two upper spinal processes of the dorsal vertebræ; the paralysis did not extend to sensation; he felt rather acutely any pinching or pressure on his limbs or body; pulse 80; artery very round, full, and firm. In person the subject of this accident was about 5 feet 6 inches high, forty-four years of age; had a very short neck; was very round, solid, and fleshy; temperate in habit, and had a very good constitution.

Having examined the cervical and superior dorsal vertebræ, no trace of fracture or displacement, or even the least mark of a contusion on the surface; tenderness on pressure more general. The most remarkable characteristic of this injury was the perfect paralysis of motion, independent of insensibility, the sensibility of the surface being rather exalted; there was priapism occasionally.

November 1st, 8 a.m.—He was bled to fainting immediately, and the catheter relieved the bladder of a large quantity of urine. 11 a.m.—The pulse having recovered its fulness and firmness, the vein was again opened, and he was bled till he fainted. Altogether he

lost about 45 ounces of blood; ordered a purgative bolus. 9 p.m.—He complained of acute agony on being moved, but required frequent changes of posture; pulse 80, and soft; the ribs still fixed in respiration, the chest having none of the expression of a breathing body till the hand was placed on the epigastric region; bowels have not yielded; ordered a purgative enema.

November 2nd, 9 a.m.—Passed a painful and sleepless night; the enema moved the bowels moderately; ordered to be repeated; chicken broth. 2 p.m.—Could adduct and abduct the thumb of the left hand, but very slightly. 9 p.m.—Pulse again risen; felt himself very hot and feverish; bled to 20 ounces; fainted.

3rd, 11 a.m.—Night still sleepless and painful; very weak for several hours after venesection; had obtained marked power over the lower limbs; slight supination and pronation of the forearm; ordered a purging enema.

4th, 11 a.m.—Bowels unmoved, except by enemata; had some slumber during the night; complained much of pain of his neck; ordered twelve leeches to the part. 10 p.m.—Leeches bled indifferently; pain unabated.

5th. No sleep in the night; complained of distressing weight of his limbs; felt as if *immersed in snow below the knee*; bladder very much distended; suffered great distress from that cause; could *raise his legs perfectly off the bed*, and *lift his right arm a little*; pulse quiet and soft; ordered an enema.

It is unnecessary to pursue the daily report of the case; the power of motion progressively increased, but his life' was soon brought into nearly hopeless peril by

that form of inflammation of the mucous membrane of the bladder, so frequently the forerunner of death from injuries of the spine: enormous collections of viscid, ropy mucus filled the bladder, closing the opening in the largest gum-elastic catheter. I succeeded quite beyond my expectation in relieving his torment, and finally in altogether overcoming the disease of the bladder, and establishing his recovery, by “*vesicæ loturæ*,” now frequently used, but at that time of rare application. It was months before he went about on his feet again; he had not the weakness of the knees of the paraplegic, nor the drag of the leg of hemiplegic paralysis, but his motion was retarded and stiff. There remained rigidity of the fingers of one hand, and of one shoulder-joint. The sensation of the limbs below the knee, as long as I knew him after, was depraved; the sensation first complained of, of being immersed in snow, changed to that of pungent heat, of which he always complained to me. It can scarcely be doubted that the inferior cervical and superior dorsal spinal marrow suffered organic injury; permanent effects remained to testify the fact. He survived the accident about ten years; walked with little difficulty with a common walking-cane; contracted a second marriage with a young woman, and died some months after. I am not acquainted with the cause of his death.

CASE III.—*Paralysis beneath the Phrenic Nerve during Dentition.*—October, 1844. Called to visit a child, twenty months old, who had total paralysis of motion of the lower extremities, as well as the superior; no loss of sensation. Dentition was not yet complete;

during this process (dentition) she had repeated attacks of sudden tumefaction of the feet or hands, always successfully repelled by scoring the tumid gums over the coming teeth, conjoined with an aperient dose. However, the attendant of the child, either grown careless or sceptical, having seen so many threatening attacks and no ill result, omitted to send for the medical attendant. In the morning she found, as I have described, her charge paralysed totally, from the neck down. I could discover no cerebral symptoms; and as my judgment of the case was opposed to active measures, I desired a consultation, and saw the late Dr. S. S. Thomson, who concurred with me in the line of treatment, which was essentially tonic, using counter-irritation over the spine. This treatment was perseveringly carried out. The improvement was slow, but steady; the upper extremities recovered perfectly, but there was great defect for a long time in the lower limbs, the flexors of the legs producing a case of double "talipes equinus;" for this I used Stromeyer's splints with good effect. In 1845 a considerable degree of talipes remained, with very distorted muscular motion of the muscles of the pelvis and thighs. Sir Benjamin Brodie, and the late excellent surgeon, Mr. Bransby Cooper, met me in consultation in London.\* Sir Benjamin Brodie and Mr. Bransby Cooper recommended a continuance of the systematic tonic course and hygiene

\* Sir B. C. Brodie had never seen a similar instance of paralytic seizure in the child; and I believe there is no case of recovery hitherto recorded. Except from my assurance that the child had previously the full activity of her limbs, he would have certainly recognised it as a congenital malady.

which had been pursued ; to abstain from all mechanical devices and supports ; to rely upon unlimited freedom of voluntary exercise in the open air ; and gave a confident opinion, from the degree of recovery which had already taken place, that nature was sufficient to restore the limbs to their perfect development and motion by the time growth was finished. Ten years afterwards, as the patient was in the neighbourhood of London, I requested the parents to submit her for examination to Sir Benjamin Brodie, who, in a letter to me, expressed himself satisfied by the progress of the ease. The measure of imperfection remaining, he expects, will be finally overcome.

These three cases illustrate a diversity of morbid action arising out of disease or injury of the same portion of the spinal marrow. In Case I we have solely a lesion of nutrition of certain muscles, beyond which muscles nutrition is intact. In Case II paralysis of motion is combined with exalted sensibility of the superficial nerves of sensation ; this changes to a sense of intense cold beneath the knees ; this again to a sense of burning heat, the thermometrical temperature being normal. In the third case, motion alone is lost ; on its recovery, followed by contraction of spinal muscles, namely, the gastrocnemii and solei. I think it is indisputable that organic lesion of the spinal marrow existed in every case. There was nothing in common as a symptom in any, except that of motion in Cases II and III. All other signs were as dissimilar as the originating cause, namely, injury in one, and spontaneous disease in the other. Case I only bears a similitude as



to the seat of disease ; it stands alone as a pathological phenomenon, without a parallel, or use unless as an aid to future investigation in physiological science.

In conclusion, I beg to advert to the very different treatment in these three cases of diseases of the spinal marrow. In the first alone was mereury used for its specific action ; in the second, antiphlogistic treatment was carried to its extreme limit—bleeding several times to syncope in the recumbent posture ; and it was only on the repetition of it that the paralysis yielded. In the third, with the same phenomena of spinal paralysis, the treatment was tonic, with nutrition to the capability of the stomach to tolerate it ; and in all, if success be a test of its discretion, it was in accordance with the respective but opposite indications.



## A P P E N D I X.

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*Note on quotations in paper (Second Series), third page, beginning, "Regimental surgeons are well aware how often the men in their corps are affected with venereal disease."*

I owe to Dr. Frederiek Robinson, of the Foot Guards, to use the earliest opportunity in my power to correct any impression my reference to his letter in the 'Medical Times' might have implied, that mercury had been abandoned in the treatment of soldiers having venereal disease in military barracks. The best amendment I can offer is to publish his reclamations and corrections of my error in his own most courteous note to myself:—

"Your remarks relative to the non-mercurial treatment following the extract from my letter in the 'Medical Times,' may ('although possibly not intended by you') lead to the impression that non-mercurial treatment was adopted by the medical officers of my corps.

"I believe the practice in the army is the same as that pursued by private practitioners, viz. the employment of mercury in cases of indurated sore. Inunction has

always been the form used in our hospitals, and found most successful.

“The reason so many are lost to the service is attributable rather to the nature of a soldier’s duty—exposure to cold and wet on and off guard, as well as to repeated infection. The nature of their duty (and course of life often) must necessarily render them obnoxious to secondary and tertiary symptoms, which, under more favorable circumstances, might not be engendered.

“I am, dear Sir,

“Your very obedient servant,

“FREDERICK ROBINSON.”

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Case IX (Second Series).—In our books of nosology, ague has never, I suppose, been assigned to the class Neuroses. Mason Good has placed it in the *Hæmatia*—*G. Anetus*, s. *Anetus quotidiane*. I find, however, that Sir Thomas Watson, in his ‘*Lectures on the Practice of Medicine*,’ 4th edition, describes ague as a disease of the nervous system.

I now also give the only cases I know of in any literature in full from the prize essay of M. Zambaco, ‘*Des Affections Nerveuses Syphilitiques*,’ Paris, 1862.

“Although intermittent fevers are not generally placed in the rank of neuroses, the important part in the manifestation of their symptoms which is traceable to the nervous system cannot be disputed, and when syphilis is accompanied by similar accidents it is evidently by

means of this system that it must exert its influence. We do not believe, therefore, that we are passing the natural limits of our subject in recording the following observations.

“The reader will, no doubt, find them of use both from the diagnostic and therapeutic points of view when making acquaintance with facts which have embarrassed eminent practitioners.

“OBSERVATION 74.—*Quotidian fever, symptomatic of a constitutional syphilis; failure of sulphate of quinine; cure by mercurials.*

“A patient named X—, twenty-six years of age, entered the 26th December, 1846, into the hospital under the charge of Fouquier, Ward St. Anne, No. 19.\* Constitution very strong, health habitually excellent, well regulated; she has never had children. A month after some severe fatigue she felt her limbs disabled and was seized with a slight fever, which at the end of fifteen days had become aggravated; every evening at five o'clock the scene is opened by a shivering fit, which lasts a quarter of an hour, and is succeeded by a heat which lasts a part of the night and is followed by perspiration. Remission every morning, but continuance of headache, of weakness, and general uneasiness, during two days. The pains are increased by pressure over the entire length of both sides of the chest. The pulse seventy to seventy-two per minute; it is small, feeble, regular; breathings and sounds of the heart normal; nothing abnormal observed in the region of the spleen; lungs healthy; distaste for food; vomiting from time

\* Extract from the ‘Archives of the Medical Society of Observation.’

to time; sensibility of the hypogastrium; headache; sounding in the ears; sleep much agitated; general weakness; pityriasis of the scalp; papulæ on the forehead.

“On the 30th December a papulous eruption is remarked on the stomach; the patient maintains that she has never contracted the venereal.

“From 27th December till 18th February the patient is treated with sulphate of quinine, the dose of which was carried as high as 1 gr. 50 per day without any improvement. The fever continues to recur at the same hour and with the same three stages. Purgatives and emetics were equally useless. The sulphate only somewhat diminished the shivering; its administration has determined a great deafness and loud soundings in the ears, symptoms which, as we have said, existed before the entrance of the patient into the hospital.

“On the 18th February, seeing that the papules continued as well as the pains in the limbs, the patient is examined more attentively and the syphilitic nature of the affection is recognised. Prescription—two pills of Sédillot daily. *The fever is abated from the first day of this treatment. Thus, on the 22nd February the patient has scarcely had any during the night, and that little without the preliminary shivering. From the 23rd February the fever does not return,* but the pains in the head and limbs continue. On the 6th March the strength is observed to return and the appetite to increase, but the pains in the limbs still exist, particularly during the night; the mercurial pills are continued. The improvement has been progressive from that epoch, and on the 30th March the patient goes out cured, that



is to say, with a disappearance of the syphilitic symptoms.

*“Reflections.*—Here there is a patient a prey to nervous symptoms, clothed in the intermittent form, and so closely resembling a marsh fever as to mislead a distinguished practitioner.

“Certainly, the three stages of which we have spoken in the preceding observation were not the manifestation of a particular state of the nervous system, under the influence of constitutional syphilis. For the rest, in the marsh fever itself, the troubles of the motility during the shivering fits, followed immediately by a perversion of the sensibility, by a sensation of heat without the thermometer indicating any real augmentation of the temperature of the body—all these symptoms can be explained only by a general perturbation sustained by the entire nervous system under the influence of the miasmatic poison.

“In the case of this patient the mercurial treatment put an end to these attacks, which had lasted about two months.

“Here in a few words we have the history of another patient experiencing nervous syphilitic symptoms resembling an intermittent tertian fever. We owe it to the extreme kindness of Dr. Lasègue, then physician to the hospital of Lourcine, now to that of Necker.

“Three years ago this physician was consulted by a merchant, aged about thirty-four. He was a man living under the most favorable hygienic conditions, and who had never experienced any serious illness. In the middle of excellent health, and without any appreciable cause, X— began to grow thin and pale. Some time

after the commencement of this change in his general health he suffered every second day an attack of intermittent fever, or rather a combination of phenomena of the intermittent tertian type. Thus, towards ten o'clock in the morning he was seized with intense fits of shivering, spreading through the whole body, and lasting about an hour; then violent spasmodic movements burst out, shaking the muscles of the limbs particularly. Immediately a state of intense heat supervened, followed by profuse perspiration. These various phenomena, always occurring in the same order, disappeared towards three or four o'clock in the afternoon, leaving the patient in a state of extreme prostration.

"The sulphate of quinine had diminished the frequency and moderated the intensity of these attacks, but it failed to accomplish their entire extinction. That which is unusual in the progress of this affection is that the symptoms had scarcely been manifested ten times when the patient fell into a state of profound cachexy, which was out of all proportion to the duration and intensity of the intermittent attacks. Besides, the patient had never been exposed to marsh exhalations; never before that time had he been attacked by intermittent fever. The antiperiodic treatment was then pursued without success; they did not know to what disease these intermittent symptoms were to be attributed, which did not, however, follow the usual order of the true marsh fever, when M. Lasègue, in an attentive examination, discovered the existence of a syphilitic sarcocele, which the patient had always persisted in ignoring and in concealing even from his physician. From this moment X— was submitted to a steady, continuous treatment with iodide of

potassium. The amelioration of all the symptoms felt by M. X— soon made itself apparent. In fact, one month after the commencement of the treatment no trace of the intermittent attacks remained. The profound cachexy in which this patient was plunged yielded easily to tonics and a nutritious dietary. Later the syphilitic sarcoele vanished.

“Thus this patient recovered his health, thanks to the perspicacity of the distinguished practitioner, who, suspecting the specific nature of the affection, arrested its fatal march by the use of the sovereign remedy.

“OBSERVATION. 75.—*Constitutional syphilis; attack simulating intermittent fever; impotence of the sulphate of quinine; proto-ioduret of mercury; disappearance of the syphilitic symptoms and the attacks of intermittent fever.*

“C. L—, aged 31 years, of a good constitution, has never had fever, never resided in a marsh-malarious district, was admitted July 6th, 1852, into the Hôpital du Midi, care of M. Rieord. At the time of his admission to the hospital he exhibited a chancre on the way of recovery; hard base; many glands indurated in each groin; not any constitutional symptoms, but in about ten days he was attacked with a feeling of malaise, fatigue, and general prostration; a slight sensation of cold, to which succeeded shiverings, with trembling of his limbs and lower jaw, and other manifestations of rigor, followed in half an hour with heat, and again by sweating, after which he was plunged into a state of great feebleness. The spleen was not enlarged. He was prescribed sulphate of quinine. The first two days

of this treatment the attacks were suppressed, but the third day they reappeared in the same form, but more feeble, and only for two hours. 15th July.—They increase the quinine treatment by 100 grammes of the wine of quinine. 5th August.—The intermittent attacks are still regular, and a papulous eruption appears on the skin. This becomes pustular, and advances till it resembles a variolous eruption, but nowhere confluent. The patient suffered pains of the head and limbs. The intermittents are repeated almost every day. *August 22nd.*—*Prescribe five centigrammes of protoioduret of mercury. Stop quinine. Continue wine of quinine.* *September 5th.*—*The eruption is disappearing; the cephalalgia and pain of the limbs also commenced to diminish from 29th of August progressively.* The patient left the hospital on the 25th September, 1852, by his own request.

*“Reflections.*—The first diathetic manifestations have been preceded and accompanied in this patient by nervous disorders appearing every day at fixed hours, and, in a word, assuming the form of an attack of intermittent fever.

“With this patient of M. Lasègue’s the nervous symptoms returned every second day, whilst with the patients whose cases are stated in Observations Nos. 74 and 75 the attacks were quotidian.

“With M. Lasègue’s patient the attacks took place towards ten o’clock in the morning, whilst with the two other patients it is in the evening, after sunset, that they were seized with shiverings, with tremblings, and later with heat; so that, at the same hour at which these phenomena show themselves, at the first glance

one would think it a case of pure symptomatic intermittent fever. It is, in fact, observed that in fevers essentially intermittent the attacks usually occur in the middle of the day. Besides, the quotidian type belongs, more especially in our climate, to symptomatic fever, so that the appearance of these attacks every day, and their manifestations at the commencement of the night, shall already have given warning that in those two cases it was not a true intermittent fever which had to be dealt with. The sulphate of quinine has modified the attacks in an insignificant manner, notwithstanding their regular recurrence, whilst the specifics have dissipated in the space of a few days, and in a decided manner, the whole train of nervous phenomena.

“With M. Lasègue’s patient the intermittent symptoms coincided with a tertiary manifestation, with a venereal testicle (sarcocèle); whilst in the two others they broke out at the commencement of the infection—they accompanied the first cutaneous eruptions. As in some subjects the first eruption of the skin is preceded by fever and by that combination of general symptoms which we have described under the name of diathetic neuropathy, so in others there is the appearance of hysterical phenomena, sometimes even of clonic tremblings or intermittent phenomena, appearing by preference in the evening, a characteristic which they share with syphilitic pains.

“M. Mehlhor Robert, in his excellent work, has observed that sometimes the syphilitic fever can assume the intermittent form. He states having seen under the care of M. Ricord a patient who had intermittent attacks during the latent and secondary period



of syphilis. These attacks yielded to mercury. He has omitted to tell us in what state the spleen of the patient was found.\* M. Follin says also, *apropos* of the incubation of syphilis, that patients have sometimes febrile attacks of an intermittent stamp, which show themselves sometimes in the evening, sometimes in the night.

“We consider, then, all these general distresses as the consequence of a disturbance of the nervous system under the influence of syphilitic infection; it is this which has induced us to place this chapter immediately before that of the nervous classes, such as epilepsy, hysteria, &c.”—*Translated from M. Zambaco's Prize Essay at the Imperial Academy of Medicine, Paris, 1862.*

I think I may fairly claim that the diagnosis of quotidian ague, being based on constitutional syphilis, in the month of March, 1837, has been fully corroborated by the cases and reflections published in Paris, 1862, by M. Zambaco in his prize essay. I would especially, and with great deference, ask the attention of my readers to the striking proof afforded by those cases of the singular rapidity with which the intermittent commotion of the nervous system was arrested, and the function of appetite and digestion restored. The passages bearing on this most valuable and impressive point I have directed to be printed in italics—a fact such as this in medicine can not be too forcibly promulgated.

\* ‘Treatise on Venereal Maladies,’ p. 664.

The case of muscular atrophy, which when I published the paper I described as rare—a morbid phenomenon—has since that time, from the number of cases brought under the notice of the profession, ceased any longer to be so described. But I would more especially refer to the volume by Dr. Roberts, of Manchester, whose laborious research and collections of cases noted by British and foreign authors supply such a comprehensive assemblage of cases as in strictness forbid to the subject any longer the appellation of rare. Dr. Roberts has, by his work, placed his profession under real obligation for his contribution towards the elucidation of this obscure disease, and still disputed pathology. He has achieved a work which reflects the highest credit on himself for the marked ability and literary skill with which it has been performed. But in regard to the existing difference amongst the distinguished authors who have stated their opinions on the special pathology of the disease, Dr. Roberts has undertaken to prove that in the peripheral distribution of the nerve of the affected muscles we are to seek for the seat of destructive atrophy and destitution of muscle, and not at the source and origin of the nerves in the spinal marrow, as M. Cruveilhier has described.

It is not unlikely that Dr. Roberts's argument, very impressively stated, may have satisfied many of his readers; but to my mind it is by no means conclusive, as the scientific truth can alone be decided by the progressive test of careful and well-directed post-mortem examination, in which it may be hoped the microscope will give a more "perfect insight into structure alterations. In this way, Mr. J. Lockhart

Clarke has in two cases found disease of the ganglionic corpuscles in this centre" (spinal cord). His first case was of a well-marked one of the disease in a man aged 65, who had suffered for five years. In another case, in which the disease began in the left hand, and extended gradually till it affected all parts of the body except the face, Mr. Clarke found very similar appearances. "In this case the whole cord was atrophied; there was no brachial enlargement whatever. The nerve-cells were in a singular state—atrophy without nuclei or distinct granular contents."

Dr. Gull, of Guy's Hospital, has recorded a case which is remarkable for the small degree of the affection, and the great amount of the morbid condition found in the cord. "The patient was a journeyman tailor, aged 44. Thirteen months before admission, the fourth and ring fingers of the right hand had become weak and flexed without any assignable cause; the hand was cold and numb in the fingers, but no pain. Two months before admission, the middle finger of the same hand became suddenly affected; and three weeks before admission, the three inner fingers of the left hand became weak and flexed, but without numbness. The arms were not affected. The interosseous muscles and those of the thenar and hypothenar eminences almost entirely disappeared, especially in the right hand.

"The patient died from typhus fever. On examination, a large cavity was found in the cervical region of the spinal cord, beginning at the fifth nerve, enlarging from this to the seventh, and then tapering downwards, and containing fluid,—a chronic hydromyelus comparable to a chronic hydrocephalus: what the

nature of the change in the cord, may be matter of speculation. So far as it affected the grey matter, it seemed to be more than atrophy from distension of ventricle of the cord by accumulation of fluid in it.

“Dr. Gull is reported to conclude that the disease may arise from primary disease of the muscular elements, or from lesion of the trunks or branches of the nerves, or from morbid changes in the grey matter of the cord, and that it is the difficulty of distinguishing the primary seat of the disease in each of these classes of cases which has led to exclusive and therefore erroneous views of their pathology.”

THE END.

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